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ABSTRACT

The report of the Title VI Program in Oregon presents an overview of the summer 1969 activities which consisted of 24 projects designed for the areas of trainable and educable mentally handicapped, speech handicapped, deaf, visually handicapped, deaf-blind, and emotionally disturbed. The bulk of the text presents summary abstracts of each project including information on project location, funding allocation, nature and number of group served, background and rationale, objectives, methodology, evaluation procedures, results, and third party evaluation. (RD)

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The Title VI Program In the State of Oregon

June - August 1969

Prepared under the direction of
The Oregon Board of Education

by:

Philip L. Browning
James E. Crosson
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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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SUMMER 1969 TITLE VI ESEA

COORDINATOR: Mr. James McAllister

ADVISORY COMMITTEE:

Mrs. Allene Bechtle
Director, Special Education
Springfield Public Schools

Mr. Robert Blaha
Director, Special Education
McMinnville Public Schools

Mr. Donald B. Clayton
Assistant Superintendent
Multnomah IED

Mrs. Barbara Denkman
Head Teacher
Shriners Hospital
Portland

Dr. Donald Duncan, Director
Special Education and Rehabilitation
Oregon College of Education

Mr. Karl Hayes
Supervisor, Mental Retardation
Gresham Union High School

Mr. Maurice Murray, Director
Speech and Hearing Center
Eastern Oregon College
LaGrande

Dr. Thomas Rowland
Professor of Education
Oregon College of Education

Mr. Dean Tate
Assistant Superintendent
Reynolds School District
Portland

Mr. Edgar A. Taylor, Jr.
Director, Special Education
Portland Public Schools

Mr. Kenneth Wonderly
Oregon Association for Retarded Children
Medford

Dr. Donald Zahler, Director
Regional Facility for the Blind
Eugene

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June -- August 1969

INTRODUCTION

IMPACT 3 is the third in a series of reports of the third party evaluation of Oregon programs supported, in part, by funds from Title VI, ESEA. The first two reports (IMPACT; IMPACT 2) were prepared by the Teaching Research Division of the Oregon State System of Higher Education. This report was prepared by faculty representing the Rehabilitation Research and Training Center in Mental Retardation of the Department of Special Education of the University of Oregon. IMPACT 3 reports the results of a "third party evaluation" of the projects conducted during the summer of 1969.

Implementation of Title VI, ESEA in Oregon

The bases for implementation of Title VI, ESEA in Oregon have been described in the two previous reports. IMPACT 2 indicates (pp. 1-4) that:

> "Title VI of the Elementary and Secondary Education Act of 1965, P.L. 89-750, as amended, authorizes the U. S. Commissioner of Education to make grants for the purpose of assisting states in the initiation, expansion, and improvement of programs and projects for the education of handicapped children at the preschool, elementary, and secondary school levels. The term 'handicapped children' includes the mentally retarded, hard of hearing, deaf, speech impaired, visually handicapped, seriously emotionally disturbed, crippled, or other health impaired children who, because of their handicaps, require special education and related services.
>
> "Foundation of the Title VI program within any state is the State Plan, the contract or agreement between the state and the U. S. Office of Education, for the operation of programs and projects for handicapped children at the preschool, elementary, and secondary school levels. The plan submitted by the State of Oregon was approved by the State Board of Education on April 10, 1968 with an effective date of April 18, 1968. This plan was approved by the United States Office of Education on May 5, 1968.

"The State Plan described the present statewide educational program for handicapped children...and...the procedures for the administration of Title VI within the State.

"In order to determine which projects were funded under the Title VI program, the Oregon Board of Education, with the assistance of the Advisory Committee, defined and selected the following criteria for establishing priorities for funding projects and programs:

1) The extent to which the project will provide special education services to categories of handicapped children who are not being served or served adequately through the state reimbursed handicapped child program.

2) Adequacy of description and documentation of the need for the special education service desired in the project. Highest priority to projects that stress unmet needs by documenting the number of handicapped children needing the special educational service proposed.

3) Extent to which the project stresses early identification of handicapped children and includes aspects of early treatment.

   Highest priority to projects that provide preschool special education services to handicapped children.

4) Adequacy of the project procedures for identifying the handicapped children to be served.

   Highest priority to projects that provide adequate diagnostic provisions for selecting children in need of the special education service.

5) Extent to which the project is of sufficient size, scope, and quality to give reasonable assurance of meeting the educational needs of the handicapped children to be served.

   Highest priority to projects that provide special educational services focused on manageable numbers of handicapped children qualifying for the service and to projects that are designed to provide comprehensive service for these children.

6) Evidence of supplementation of the regular school program by the proposed project or program.

   Highest priority to projects that make specific and realistic plans for integration into the regular school program of the handicapped children served by the project.

7) Extent to which other community and state resources are represented in the planning and operation of the project or program.

Highest priority to those projects that make full use of other community and state resources that are able to assist in the planning and operation of the project.

8) Provisions for evaluating the effectiveness of the special education services to be provided in the project.

Highest priority to projects that include specific evaluation procedures that are consistent with the objectives of the project appropriate for the services provided.

9) Provision for participation of qualified, non-public school handicapped children in the project.

Highest priority to projects that make provision for participation of eligible handicapped children enrolled in private schools in the area to be served by the project.

10) Adequacy of the size and qualification of the staff.

Highest priority to the projects employing or purchasing the services of well qualified staff and with a high enough ratio of project staff to the number of handicapped children to be served by the project to ensure effective service.

11) Adequacy of the facilities, both existing and proposed, for conduct of the project or program.

Highest priority to school facilities that are already available to the district and considered appropriate for the needs of the project. Low priority to expenditures for construction of school facilities in which to conduct the projects.

12) Economic efficiency of the proposed project.

Highest priority to those projects listing a detailed budget of estimated amounts of funds required for operation of the project and for cost-service ratios that are consistent with the special education services to be provided.

"The policies and procedures under which Oregon initiated, approved, and conducted state programs and projects and local programs and projects were described completely in Impact of the Title VI Programs in the State of Oregon. Essentially this procedure involved school districts submitting applications for Title VI monies. These applications were reviewed by the Advisory Committee who determined recommendations for funding of applications. These recommendations were approved by the Oregon Board of Education who then notified the applying districts."

Projects approved for the summer of 1969 were processed according to the procedures used during the two previous competitions.

Third Party Evaluation

A unique feature of the Oregon Title VI program is the provision for a third party evaluation of the program. The two previous third party evaluations were conducted by staff from the Teaching Research Division of the Oregon State System of Higher Education. The current evaluation -- for the summer of 1969 -- was conducted by faculty from the Rehabilitation Research and Training Center in Mental Retardation of the Department of Special Education of the University of Oregon.

Subsequent to the approval of the Title VI applications by the Oregon Board of Education, four representatives of the Research and Training Center and the Coordinator of Title VI programs met with project directors and staff in Salem. These meetings were held prior to the beginning of each project. The focus of the meeting was on both the plans for implementing the project and the procedures for implementing the evaluation. Typically, the result of these meetings was the establishment of a firm evaluation plan and the determination of the kinds of data to be collected. In a few instances, Center staff met with project staff for a second time in order to finalize evaluation plans and procedures. These follow-up meetings were always conducted at the location of the project prior to its implementation.

Each of four Center representatives monitored specified projects. During the course of the summer the monitor visited his projects at least once. In addition, representatives of the Oregon Department of Education and the Title VI Coordinator visited the projects. These visits provided project directors with the opportunity to obtain expert consultative assistance with the operation of the project. The visits also provided Center and State Department of Education staff the opportunity to review the progress of the project and its evaluation.

At the end of each project, the project director was to submit to the Research and Training Center a report of the project and copies of the evaluation data collected. All of the projects submitted data; several projects submitted accompanying narrative reports. Data resulting from each project were evaluated, treated statistically, and summarized in a project summary prepared by the third party monitor.

This report contains the project summaries prepared by the four third party evaluators. Therefore, there is some variation between projects in terms of the way in which data are presented. Raw data were not presented in this report. The decision to exclude raw data (as well as other editorial decisions) was made by H. J. Prehm, who did the final editing on the report. Persons interested in the raw data can obtain them from either the Coordinator of Title VI programs or from the local project director.

Overview of the Summer 1969 Program

A total of 24 projects were approved for the summer of 1969. The total amount expended by the projects was approximately $132,000.00. The locations[1] of the 24 projects are presented in the following page. Of the 24 projects, seven provided service to the trainable level mentally retarded; five served the educable mentally retarded; four focused on the speech handicapped; three served the deaf; one served the visually handicapped; one served the deaf-blind; one program served the seriously emotionally disturbed; and two were combination programs which focused on the speech and/or hearing handicapped.

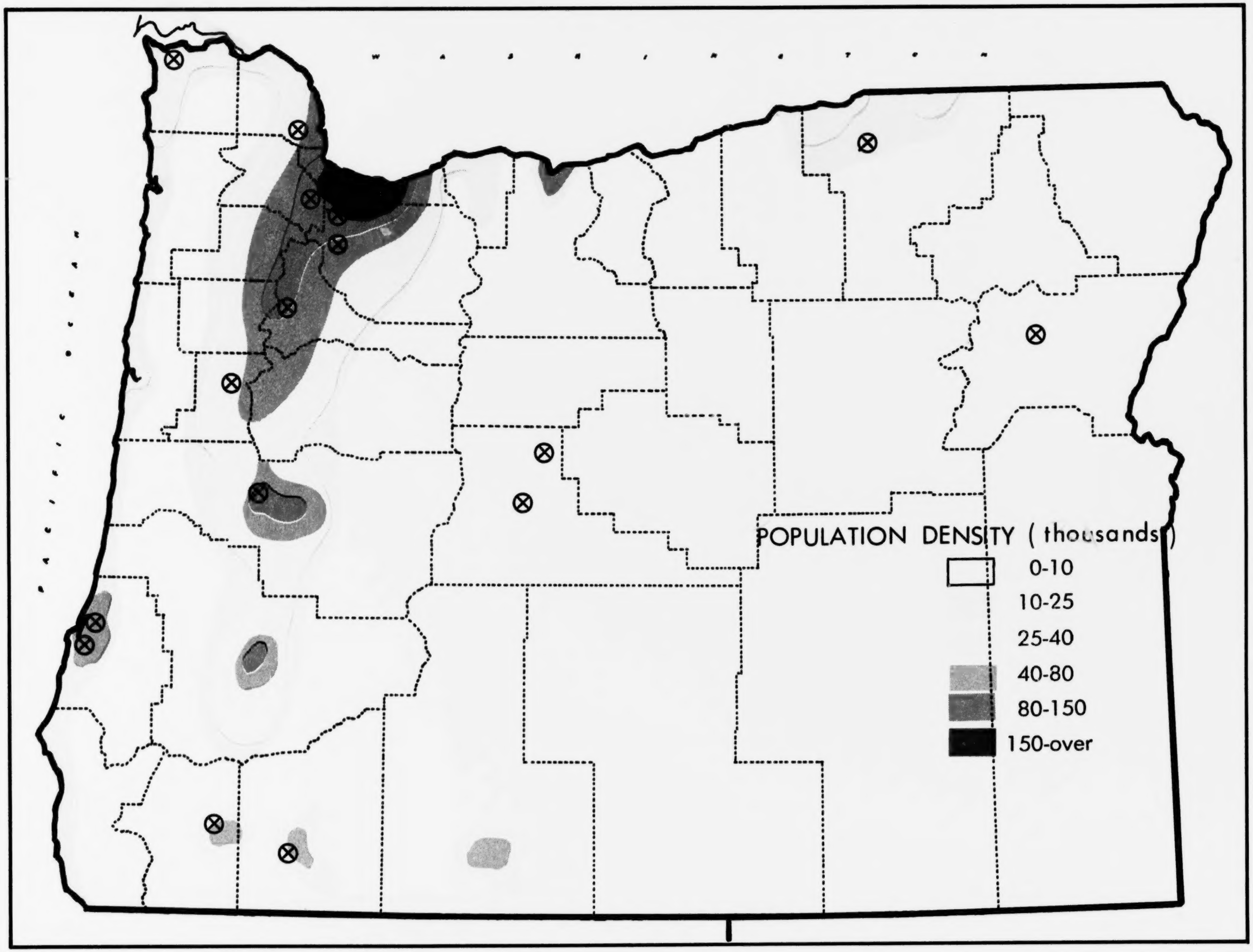
A total of 663 children received services through this program. Of the 663, 422 (65.65%) were male and 239 (36.05%) were female (the sex of two children was not reported). A total of 462 (69.68%) children lived within an incorporated area while 184 (27.76%) children lived outside an incorporated area (the location of residence was not reported for 17 children). The primary disability of the children served is presented in Table 1. Most of the children were mentally retarded; the second largest group served was the speech handicapped.

The children enrolled in summer projects ranged in age from 2 years, 7 months to 36 years, 6 months. The average age of the children served was 10 years, 9 months. As can be seen from Table 2, over 50 per cent of the children were below the average age of the group and over 75 per cent were below 14 years of age.

Table 3 reports the number of families at various income levels. The median family income was $7,769.96. Project staff were unable to determine the family income in a large percentage of the cases. These data indicate that while a number of families were at poverty levels, the group as a whole was not.

The cost efficiency of the summer program, per project, was determined by multiplying the number of children in the project by the number of project days. The resulting product was used to determine the daily cost of the project per pupil. This ratio varied from a low of $1.34 per day per pupil (Project No. 107) to a high of $22.39 per day per pupil (Project No. 79).

[1] Where two or more projects were in the same area (e.g. Eugene, Springfield) only one x was put on the map.


POPULATION DENSITY (thousands)
0-10
10-25
25-40
40-80
80-150
150-over

⊗ location of funded Title VI Projects

Table 1

Frequency with Which Handicapping Conditions Were Reported as Primary Disability

Condition	f	Per Cent	Cumulative Per Cent
Mental Retardation, Educable	138	20.82	100.00
Mental Retardation, Trainable	177	26.69	79.18
Learning Disabled	30	4.52	52.49
Seriously Emotionally Disturbed	26	3.92	47.97
Hard of Hearing	27	4.07	44.05
Deaf	58	8.75	39.98
Visually Handicapped	15	2.27	31.23
Crippled	3	.45	28.96
Speech Handicapped	156	23.53	28.51
Other	33	4.98	
Total	663	100.00	

Table 2

Age Distribution of Children Served

Age Level	f	Per Cent	Cumulative Per Cent
19-0 +	28	4.22	100.00
18-0 -- 18-11	17	2.56	95.78
17-0 -- 17-11	16	2.41	93.22
16-0 -- 16-11	30	4.53	90.81
15-0 -- 15-11	33	4.98	86.28
14-0 -- 14-11	37	5.58	81.30
13-0 -- 13-11	49	7.39	75.72
12-0 -- 12-11	42	6.34	68.33
11-0 -- 11-11	48	7.24	61.99
10-0 -- 10-11	53	7.99	54.75
9-0 -- 9-11	46	6.94	46.76
8-0 -- 8-11	49	7.39	39.82
7-0 -- 7-11	67	10.11	32.43
6-0 -- 6-11	41	6.18	22.32
5-0 -- 5-11	41	6.18	16.14
4-0 -- 4-11	14	2.12	9.96
3-0 -- 3-11	7	1.06	7.84
2-0 -- 2-11	4	.60	6.78
Not Reported	41	6.18	
Total	663	100.00	

Table 3

Median Family Income

Income Level	f	Per Cent	Cumulative Per Cent
Child Supported by the State	13	2.02	100.00
Unknown	100	15.55	97.98
$10,500 +	113	17.57	82.43
8,501 - 10,500	99	15.40	64.86
6,501 - 8,500	145	22.55	49.46
3,500 - 6,500	139	21.62	26.91
<3,500	34	5.29	
Total	643	100.00	

The median project cost was $5.23 per pupil per day. On the basis of these figures, it is apparent that the money invested in services to handicapped children was made to stretch as far as what might be considered to be feasible. These figures indicate that the cost of the program per pupil per day was not excessive.

PROJECTS LISTED BY TITLE

This section of the report presents summary abstracts of each project. In addition, data relevant to the evaluation of each project are presented. Persons interested in obtaining more complete descriptions of a project should write the district in which the project was held specifying that they would like information relative to that district's summer 1969 Title VI project.

Two projects are worthy of special note. Both projects focus on the Trainable Mentally Retarded. One project was conducted in Corvallis, Oregon; the second at Pearl Buck Center, Eugene. These projects are noteworthy because of the sophistication of the procedures employed to implement and evaluate the projects, as well as the amount of data produced. Both projects had the advantage of having highly qualified and skilled consultative assistance. No data from these projects are presented in tabular or graphic form. Comprehensive reports are available from either the project directors of the two projects or the Title VI Coordinator.

Project Number: 79

Independent Living Skills Workshop for Blind.

Group Served: Visually Handicapped

Project Location: Eugene.

Funding Allocated: $3,785.00

Number of Children Served: 13

Background and Rationale:

When visually handicapped students attend regular public school classes, with the support of itinerant teachers, the teacher-pupil acquaintance is limited to short periods of time in a formal situation. Because of the nature of their handicap, these students need both special help in filling experience gaps and extra time for learning skills which are ordinarily acquired visually by sighted children. This project was designed to fill one such gap by giving visually handicapped children a "semi-camping" experience at the Oregon coast.

Objectives:

1. To assess, develop, and evaluate the living skills of the visually handicapped students in an unfamiliar environment.

2. To become better acquainted with students.

3. To help parents become more realistically aware of their child's potential.

4. To evaluate this type of program for future use with the blind and other handicapped students.

Methodology:

This project was conducted from June 16 to July 3. Prior to the commencement of the project, staff members participated in in-service training. This consisted of studying available literature, individual discussions and planning with the director. During the first three days of the project, teachers and students (CA 8 to 18) became acquainted through introducing the program, planning menus and shopping lists, arranging transportation to and from camp, as well as testing and practicing certain skills (e.g., dressing and grooming, care of room, etc.). During the subsequent two days, the staff went to the coast to prepare quarters and plan detailed schedules for the following nine days.

At the coast, staff and children shared the following activities:

1) Cooperative Living Skills--

   a) Self-care, grooming, control of personal properties, care of quarters, and eating skills.

   b) Household chores, food preparation and serving, cleaning up, shopping, operating laundromat, and budgeting funds.

   c) Counseling, as a group in daily discussions, and individually as needed.

2) Education and Recreation--

   a) Field trips to the Oregon State University Marine Biology Museum at Newport, Cape Perpetua Museum, and beach combing.

   b) Hiking, swimming at Sutton and Cleowox Lakes, riding in a sand buggy, fishing (in lakes, the Yachats River, and by charter boat on ocean), touring Newport Bay by boat, and scuba diving at Honeyman Park.

Teachers became well acquainted with the students through sharing and supervising these activities on a twenty-four hour daily schedule. Group discussions were directed toward problems of adjustment or misunderstanding, as well as planning for coming activities and entertainment.

During the last few days of the project, the director visited the children in their homes. At that time she introduced the special equipment (which arrived late) and reviewed the newly-learned skills with students and parents as a follow-up and final evaluation. Discussions with parents stressed the child's needs for skills and self-assurance in maturing in a sighted world. Those parents who visited the workshop activities were able to observe their own child (as well as other children similarly handicapped) enjoying group activities. A sighted sister of one eight year old child assisted as a volunteer assistant and thereby shared all activities with a sensitive appreciation of the various handicaps and abilities encompassed in the group.

Evaluation Plan:

Principle evaluation was done by the staff using a check list of the items on the Living Skill List taught during the project. Pre- and post-tests using a Likert Scale (1 through 5) provided an indication of ability to perform each of the items on the Living Skills check. Students also scored themselves on these skills. Teachers made daily observations and prepared narrative evaluations. Parental "evaluative" comments were considered when judgements arose from direct observations during the workshop or in the home. The project director assessed the "realistic awareness" of parents with terms of their child's potential. By means of group discussions, the staff members evaluated this type of program in terms of future use with blind and other handicapped children.

Results:

Table 1 shows the average pre- and post-test scores obtained by the project staff on the four classes of Living Skills -- Dressing, Room Care, Meal Preparation, and Miscellaneous Skills. Included also are the t-scores and levels of significance for each. It is seen that all t-scores are significant beyond the .01 level. Students scored themselves only once; this provided a means of stressing or promoting an awareness of the importance of these skills to them, rather than providing an indication of project success.

Table 1

Mean Pre- and Post-Test Likert Scores on

Living Skills Check List

Skill	Average Score				
	Pre	Post	D	t	p
Dressing	29.85	33.08	3.23	5.24	<.001
Room Care	9.31	11.23	1.88	8.02	<.001
Meal Preparation	7.00	8.25	1.25	33.14	<.001
Miscellaneous	20.00	22.30	2.30	8.66	<.001

Teacher evaluations of each pupil conceivably could be of value in educating and assisting them in the future. For example, one item of importance was the extreme reluctance of most braille students to do oral reading. This is an academic skill which should be practiced and encouraged during the school year and at home. Teachers learned that the students do not acquire or refine skills unless extra time and attention is provided individually.

Most parents showed interest in the program and expressed appreciation of teachers' opinions and efforts in evaluating their children. Only one family appeared to be disinterested. Several parents found the workshop to be of real value in overcoming their reluctance in entrusting their children to the care of others.

Of the many behavioral changes observed by the staff, four examples are provided: (1) One nine year old who seemed unusually immature, stalled when eating, avoided other children, and became homesick early in the program. He was encouraged to continue by his parents and then advanced surprisingly. He enjoyed new skills, learned to feed himself at a more normal rate (gained five pounds), volunteered for extra work, and began entering into games and activities with desirable signs of aggressiveness. (2) The older boys who rejected all group activities at first, because of the "little kids," happily shared a marshmallow roast on the beach. Toward the end of the program they played games with all the boys. (3) The fact that these youngsters ranged from 8 to 18 years in age and yet learned to work and play cooperatively with apparent joy and satisfaction seemed noteworthy. (4) The daily "neatness award," given to the room or trailer which showed the best housekeeping, was an effective device in motivating students to "keep things in order."

At the close of the project, staff discussions resulted in several recommendations for continuance and/or modifications of the program:

1) In general, the program seemed to be of sufficient value to children, families, and teachers to make it economically feasible. Of importance to student morale and community appreciation was the fact the program was financially independent, thus there was no need for requesting charity.

2) The program afforded excellent opportunities for counseling children and their families.

3) Schedules should always be flexible enough to allow for changes because extremes in weather conditions may occur. Daily schedules (in print and braille) should be prepared during discussion and planning periods and then posted.

4) A ratio of not more than three students per counselor would be more effective.

Third Party Evaluator's Comments:

The success of this project is apparent. The data analysis of pre- and post-test scores indicates fulfillment of the first objective -- "to develop living skills of visually handicapped students in an unfamiliar environment." The discussion of the teacher's evaluations of students is supportive of "teachers becoming better acquainted with students". It was the project director, herself, who assessed the degree to which parents were realistic concerning their child's potential. While her judgements are subjective, they are supported by actual parental comments. Thus, it appears reasonable to conclude that as a result of the project, at least some of the parents became better informed as to what their child could be expected to accomplish. The fourth objective pertained to an evaluation of the project in terms of future use with blind and other children with handicaps. Several suggestions were set forth by the members of the staff. Fulfillment of the first three project objectives is supportive of the fourth objective.

This project was of a short duration and, therefore, focused primarily upon "acquisition" (e.g., development of living skills, becoming acquainted with students, and becoming aware of each child's potential). "Maintenance" of these gains and "making use of them" are implied; yet, it would be interesting to re-evaluate performance at a later date.

Project Number: 80

Initiation of a Public School Program for the Trainable Mentally Retarded: A Summer School Program for Handicapped Children and In-service Training for Teachers.

Group Served: Trainable Mentally Retarded

Project Location: Corvallis

Funding Allocated: $6,750.00

Number of Children Served: 40

Background and Rationale:

Prior to the commencement of this project, there had been no facilities for the trainable mentally retarded in the public schools. The Benton County Association for Retarded Children (a private organization) previously attempted to provide services for these children. These services were limited due to numerous conditions: inadequate finances, no physical plant of its own, and dependency on volunteer transportation by parents. Teacher training was largely limited to on-the-job experience. Virtually no evaluation or diagnostic services were offered. The Association had to limit services to youngsters between the ages of 6 to 18 years.

Recognizing the limitation of its program, the Benton County Association for Retarded Children was most anxious for the public schools to initiate a program for the trainable mentally retarded which would adequately fulfill the children's needs. It was anticipated the program initiated through this Title VI Project would fulfill those needs.

Objectives:

The objectives of the program, as stated in the Title VI proposal, were as follows:

1. To produce a change in behavior to be specified in the areas of motor development, social development, and academic proficiency of children participating in the program.

2. To increase the knowledge of the teachers participating in the program regarding behavior modification principles and techniques.

3. To cause the teachers participating to increase their utilization of the tools of behavior modification and data recording.

4. To increase the knowledge of the parents participating in the program regarding behavior modification principles and techniques.

5. To cause the parents participating in the program to increase their utilization of the tool of behavior modification and data recording with their own child.

Methodology:

The six-week program was divided into two major parts. The first two-week session was primarily a training session for teachers and aides. Fifteen teachers participated in the training program on a full-time basis. This group represented one of three teaching assignments -- trainable mentally retarded, educable mentally retarded, or behavior problems. Seven other individuals (many of whom were volunteers) to be involved later in the program, participated in the two-week training session on a part-time basis.

The second part of the program was a four-week summer educational program for trainable retarded children. Twenty-nine TMR's and 11 EMR's (CA 2-11 to 18-4; $\overline{X}$ 10-4) participated in the program. This ensured a full teaching load in each of the classes, since some of the trainable children had planned to be away from the area during the summer months. This four-week session allowed the teachers an opportunity to: (1) become acquainted with the children they would teach in September; (2) prepare a curriculum appropriate for the level of children they would teach; and (3) obtain base line data and to prescribe individual programs for the children.

The project also included a parent training program which utilized behavior modification techniques in the home to augment the teaching being conducted in the classrooms. This was considered to be an innovative approach to the training of parents by extending the education of the child into the home.

Evaluation Plan:

The main emphasis of the project was directed to the success in the conversion from a private to a public school program for the trainable mentally retarded. It was anticipated these activities would result in: (1) the formulation of a transitional model (2) a narration of the special problems encountered; and (3) recommendations to other school districts planning to undertake such a public school program. In order to provide some "hard data" relevant to the five behavioral objectives specified, the following methods of evaluation were used:

Student behaviors (specified in the areas of motor development, social development, and academic proficiency) were recorded in a manner consistent with the procedures outlined in Ogden Lindsley's "Precision Teaching." It was hoped that as the four-week period progressed, the teachers would be able to chart the response rates on the six-cycle log chart (graph) paper. Data analyses would provide indications of desired changes in student behavior.

Pre- and post-tests were administered to teachers to measure the increase in the amount of knowledge acquired regarding the principles and techniques of behavior modification. It was also necessary to determine whether the teachers actually used the techniques of behavior modification. This was accomplished by specifying certain techniques the teachers were to use in the classroom; then observation and recording of teachers' use of these techniques were to provide a basis for this determination. It was assumed an increase in the amount of recording a teacher did would indicate an increase in the use of behavior modification techniques.

Pre- and post-tests were used to ascertain increases in knowledge acquired by parents regarding the principles and techniques of behavior modification. The degree of utilization of behavior modification techniques by parents was also determined. Initially, a parent would be asked to observe one behavior of the child and to record data. It is anticipated during the six-week period, two and possibly three behaviors would be recorded.

Results:

The major focus of the project was the degree of success in changing from a private to a public school program. A comprehensive discussion of this transition appears in the final report submitted to the State Department by the project staff. The topics were: approval of the Board; consultants; facilities; equipment and supplies; transportation; and teachers and aides. The action by the Board of Directors reflected a critical and necessary conviction that education must be provided for all children. The duties and responsibilities of the consultants hired were clearly delineated. The facilities used are not only described, but floor plans are provided as well. The rationale for remodeling the classrooms was provided; many unique features had been incorporated into classroom plans. A list of the supplies and equipment ordered by each grade level (with costs) was provided in the final report. Solutions to the many transportation problems encountered were also described. A section appears in the report which discusses the qualifications of the teachers and the aides and the policies for hiring them.

With respect to teacher training, all courses were passed with either grades of "A" or "B." Differences between the pre- and post-tests of the behavior modification course were significant at the .001 level. The quantity and quality of teacher-obtained data on pupil behavior reflect the degree to which the teachers were utilizing the principles and techniques of behavior modification. Video taping of one classroom each day provided "feedback" to the teacher and others of the degree to which the techniques were being used.

Apparently the pre- and post-testing of parents on factual knowledge (regarding the principles of behavior modification) was not conducted. Actually, such testing appears to have been unnecessary because it was indicated in the final project report that the parents utilized the techniques. Thus, it is reasonable to conclude the parents had acquired factual knowledge as well.

Almost one half of the final project report (about 50 pages) is devoted to reporting the program's effects on the children. Fourteen individual records (six-cycle log paper) and ten individual programs appear to illustrate a variety of desirable behavioral changes. Discussions accompany the many successful projects. A 20-day toilet training program (at the preschool level) did not produce the desired results with all five children. A follow-up study of two of the children indicated more encouraging results. It is anticipated that continuation of the toilet training program in the fall will be more successful. Records of 11 children display successful performance in the Frostig Visual-Motor Coordination Program.

With respect to initial stages of curriculum development, behavioral objectives are listed for each of the class levels. These objectives are intended to reflect minimal goals rather than the entire scope of the curriculum. For each class and sub-class in the curriculum outline, two or three discrete observables are cited. For example:

I. Self-Help and Socialization

  A. Table habits

    1. Uses spoon when eating without requiring help.

    2. Drinks without spilling, moving glass in one hand.

    3. Uses "please" and "thank you."

Third Party Evaluator's Comments:

There is no doubt that this project was highly successful! The final report contains detailed and comprehensive discussions pertaining to the many problems which arose during the transitional period which were solved. The transitional model formulated as a result conceivably could be extended easily to other districts. Only minor modifications might be required.

The progress of the children is readily apparent as displayed in the tables and individual records appearing in the report. The extent of data reported is sufficient for an initial developmental program such as this.

Teacher, aide, and parental acquisition of the principles and the utilization of the techniques of behavior modification are indicated as well. The quality of an instructional program is primarily dependent upon the abilities and skills of the staff. The high grades received by the teachers in the formal course work are also indicative of proficiency attained.

The final report closes with the comment: "The school district believes that they are (it is) prepared to undertake the program as an integral part of the school district's program in the fall." This third party evaluator would concur with that statement.

Project Number: 81

Program of Intensive Therapy for Speech, Hearing, and Language Handicapped Children.

Group Served: Children with impairment in speech and/or hearing and/or language disability

Location: Weston Mountain, Weston

Funding Allocated: $18,150

Number of Children Served: 116

Background and Rationale:

This project was conducted at the Meadowood Springs Speech Camp which has been in operation since 1964 serving children from nearly every geographic region and population center in the State of Oregon. A major intent of the current project, which was a continuation of the on-going speech camp program, was to improve and expand upon the services previously offered. The duration of the project was eight weeks, two weeks of which the staff of 20 met for pre-program orientation and post-program assessment. Six weeks of service was divided into three two-week programs which served 33, 29, and 54 children, respectively. Each of the three two-week programs met on a 24-hour a day, 7-day a week basis.

Objectives:

1. To provide intensive speech and language therapy for speech and hearing handicapped children.

2. To support basic speech therapy objectives with modification of associated personal, social, and educational behavior believed to be contributing to or causitive of the speech or language problem.

Methodology:

The first week of the project was pre-camp training and the staff was instructed in detail on the test instruments used in individual student evaluation. They were also informed of the agendas for each of the three two-week programs.

The three two-week programs were similar in that each was comprised of a highly organized schedule consisting of a variety of therapy and supportive activities. Each camper was scheduled for no less than six hours per day of speech therapy and related supportive activities and was seen for a minimum of two hours of individual therapy each day. An on-going assessment in both group and individual therapy for each camper afforded a highly individualized program. In addition to the therapy phase of the program, a number of supportive activities were provided, some of which were:

1. field trips
2. field games
3. work experience
4. camp craft
5. creative arts
6. music
7. role playing and drama
8. reading
9. physical development
10. writing

The seventh week of the project terminated the service program and the remaining week was spent by the staff evaluating individual students and the program as a whole. In addition, recommendations and guidelines for future operations were made.

Evaluation Plan:

The following seven tests were used as pre- and post-test measures on the performance of each of the three groups of students:

1. Arizona Articulation Proficiency Scale
2. Wepman Auditory Discrimination Test
3. Self-Hearing Evaluation Test
4. Two-Minute Reading Test
5. Three-Minute Fluency Test
6. Three-Minute Phoneme Test
7. Modified Walker Behavior Rating Scale

Errors per minute were used as scores for tests 4, 5, and 6.

Results:

It is reasonable to conclude that the main objective of the project was met through this well-staffed, thoroughly planned, and highly organized program. As for the seven tests used to evaluate the students' performance and, therefore, the effectiveness of the program, there were significant differences in the desired direction on 2, 5, and 3 tests for Groups I, II, and III, respectively (see Table 1). It is difficult to say anything about the differential effectiveness of the three individual programs. The fact that the groups differ in terms of the number and type of test which yielded significantly different pre-and post-test measures may simply reflect a difference in the type of subjects in each group rather than a difference in the effectiveness of the program.

Table 1

Significant Differences Between Pre- and Post Scores on Seven Tests for Three Groups

Group		Tests*						
		1	2	3	4	5	6	7
I		X**						X
	df	20						16
II			X	X	X		X	X
	df		21	22	13		20	18
III		X			X			X
	df	40			24			40

*Refer to evaluation plan section for test identification (Test 1 is the Arizona Articulation Proficiency Scale)

**The symbol X means that there is a significant difference at the .05 level of confidence between the pre- and post-test scores, which in this case is Test 1 for Group I

It is presumed that the behavior rating scale was used to evaluate the second objective, i. e., deceleration of personal, social, and/or educational behaviors believed to be contributing to or causitive of the speech and language problem(s). The behavior scale yielded significant differences in the desired direction between pre- and post-ratings for each of the three groups. In essence, the results suggest that the number of deviant or undesirable behaviors decelerated significantly for all three groups. Whether these behaviors actually represent those which contribute to or are the cause of the speech or language problem(s) is unknown.

Third Party Evaluator's Comments:

On the basis of the available information, it appears that the staff was continuously attempting to improve the effectiveness of their service. It is felt that this project, which was well funded, staffed, and planned, was managed on an efficient and professional level.

Project Number: 82

Program of Speech Therapy for Handicapped Children with Severe Speech Problems.

Group Served: Speech impaired

Project Location: Baker

Funding Allocated: $4,657.00

Number of Children Served: 18

Background and Rationale:

Through a recent county-wide screening test, it was learned that two speech and hearing clinicians were serving approximately 4,500 public school children, and that approximately 260 of these students were in need of speech and/or hearing therapy. A screening of private schools indicated that 19 students were also in need of such professional services. Consequently, it was proposed that a Title VI project be initiated to serve the needs of the more severe speech, hearing, and language handicapped children in both public and private schools since they were unable to receive adequate help during the regular academic year.

Objectives:

1. To provide a more complete therapy program for public school children who present severe speech problems.
2. To initiate therapy services for the speech-impaired child attending private schools.
3. To initiate a therapy program for the severely speech handicapped pre-school child in order to reduce the probability of social and academic failure due to extreme deficiencies in communicative abilities.

Methodology:

Eighteen children (CA 4-8 to 13-1; $\overline{X}$ 8-3) were divided into three groups of six, and each group was seen for an hour and one-half a day, four days a week for eight weeks. The fifth day of each week was set aside for parental counseling, staff evaluation meetings, and staff development of speech activities that could be used in the children's homes. In addition to the daily hour and one-half group speech and language activities, each child was drawn daily from his group by one of two clinicians and given 30 minutes of individual speech and/or language therapy.

Parents were strongly encouraged to become directly involved in the program by observing their child in an individual and group therapy session at least once a week. Parents who had the time were provided the opportunity to assist the clinician in group speech and language activities.

Evaluation Plan:

Pre- and post-test measures were taken with the following two tests:

1. McDonald's Deep Test of Articulation
2. Peabody Picture Vocabulary Test

In addition, the parents were given an open ended pre- and post-questionnaire along with a seven item questionnaire to be rated at one of three levels.

Results:

On the basis of observation and reported written materials, it appears that an effective speech therapy program was developed. A single test was used to assess the effectiveness of the actual speech therapy program. Table 1 indicates that significant changes in the desired direction occurred

Table 1

Probabilities of Significant t Values for Pre-Post Scores on the McDonald's Deep Test of Articulation

	Speech Sound									
P level	S	l	r	tʃ	θ	ʃ	k	f	t	Total
.05	X*							X		
df	14							17		
.01		X	X	X						
df		16	15	15						
.001					X	X			X	X
df					14	14			17	17
NS							X			
df							17			

*The symbol X means that there is a significant difference between the pre- and post-test scores at the indicated level of probability, which in this case is .05 on the S subtest of the Deep Test of Articulation.

on all but one of the subtests. The second objective was met in that several of the students who participated came from private schools. Plans are to continue providing such services to these children since the private schools do not currently offer a speech therapy program to their students. The final objective was partially met as several of the students were of pre-school age. One will have to wait to see if this group avoids social and academic failure.

The attention given to parent participation constitutes one phase of 'a more complete therapy program.' Even though the pre-post open ended questionnaire is not subject to objective analysis, some statements from a number of parents seem to reflect the parents' involvement with the program. The results of the parent assessment, using a three-point scale,are reported in Table 2. In spite

Table 2

Parental Assessment

Statement	N	Per Cent of Agreement		
		SA	A	SD
This program has improved the communication abilities of my child	15	72.20%	11.11%	
This program has given me a clear understanding of my child's communication problems	18	88.88	11.11	
This type of program should be carried on by the IED in the future	18	94.44	5.55	
This program caused hardships and/or inconveniences to me and/or my family	17		16.66	77.77
As a result of this program, I have more confidence in dealing with my child's speech problem at home	18	83.33	16.66	
I spent enough time observing the program	18	44.44	22.22	33.33
I was given ample opportunity to become involved in the program	18	100.00		

of the scale's subjectiveness and limited number of choices, the responses appear to lend additional evaluative support to the program. The results of the intelligence test, which was inappropriate to the stated objectives of the program, were of no significance in terms of changes in pre- and post-scores.

Third Party Evaluator's Comments:

This project was designed to cope with a real problem in a location in which the manpower for speech therapy services is very limited. The program, which was well conducted and staffed with enthusiastic personnel, deserves endorsement. Particular credit is to be given to the effort made to involve the children's parents.

Project Number: 83

A Summer Program for Motor Development and Sensory-Motor Concept Formation for Trainable Mentally Retarded Children in Josephine County.

Group Served: Trainable Mentally Retarded

Project Location: Grants Pass

Funding Allocated: $2,725.00

Number of Children Served: 10

Background and Rationale:

The existing ARC school in Josephine County for young trainable mentally retarded children consists of a class of eight children meeting six hours per week in a room rented from a church with no access to outdoor space or facilities. In addition, classroom space is limited and the furniture is scaled for three year old children. Little was accomplished in the area of gross motor development during the regular school year due to the inadequacy of the facilities and the lack of motor equipment.

Objectives:

The primary objectives of the project were to:

1. provide young trainable mentally retarded children the opportunity to develop gross and fine motor skills.
2. provide concrete and meaningful experiences to aid in the formation of basic concepts such as spatial, form, and size discrimination.
3. provide instruction for children who are not eligible for public school programs and are not now receiving services of the Josephine County ARC School because the maximum enrollment has been reached.
4. provide data for impressing upon the local community and the state the need for increased services for the trainable mentally retarded through adequate facilities and financial support for expansion of the existing program.

Methodology:

Ten children (CA = 4-10; IQ = 35-61) participated in the program. All were in the trainable mentally retarded range with the exception of two considered to be educably mentally retarded. Initially, 12 children were enrolled in the program. One girl moved before the program began; the second girl was withdrawn from the program because reading and arithmetic were not taught.

Fourteen parents, the Josephine County Health Department, the Josephine County School District, Grants Pass School District #7, the Josephine County Association for Retarded Children, and the Josephine County Welfare Department were contacted and cooperated in the selection of program participants. All participants had been evaluated by the Crippled Children's Division of the University of Oregon Medical School or Fairview Outpatient Clinic.

The six week program was held five mornings a week. The program was staffed by a director/teacher, a teacher, and an aide. Both teachers were certificated, by the State of Oregon, as Teachers of the Mentally Retarded. Each child participated in an extensive program of gross motor skill activities, fine motor skill activities, and activities for development of skill in spatial, form, and size discrimination. Primary reinforcers were used to encourage performance. The children received paper badges for the dash activity and various types of snack crackers for performance of fine motor activities.

The parents of the children played a significant role in the program. The parents provided transportation for the children to and from class. They also supervised "homework" assignments (selected on the basis of the child's pretest performance). In addition, parents were frequently contacted during the course of the program regarding their child's progress. At the end of the project, staff held conferences with each parent during which a written report on their child's progress was provided to them.

Evaluation Plan:

Project staff reported that selecting a battery of tests suitable to the age and ability level of the children proved to be difficult. Test items were selected on the basis of the skill or ability to be tested and the attention span of the children.

In the area of gross motor skills, all test items appeared to be representative of the skills to be developed. Mean pre- and post-test scores for the gross motor skills tested are presented in Table 1. The children showed, as a group, improvement on all measures. The Sign test was used to determine if the number of pupils showing improvement was significant. In each area of gross motor skills tested the number of children who did exhibit improvement was significant. Pre- and post-test gains were also analyzed using the t test for dependent groups. This analysis also indicated that the pupils, as a group, made significant gains in their gross motor skills. The difference between pre- and post-means was significant for each measure.

In the area of fine motor skills, the number of children who improved was significant for only placing 15 pennies in a bank and 20 pegs in a pegboard. Although improvement was noted in the buttoning task, the improvement,

Table 1

Average Pre- and Post-test Performance on Measures of Gross Motor Skill

Measure	Mean Score		D	t*	p
	Pre	Post			
Ball Kick (in Feet)	10.11	28.13	18.02	14.45	<.01
Ball Throw (in Feet)	11.21	15.08	3.87	9.08	<.01
One Foot Balance (in Seconds)	2.53	5.85	3.32	7.47	<.01
Standing Broad Jump (in Feet)	1.03	1.28	.25	13.72	<.01
30 Yard Dash (in Seconds)	13.00	12.13	.87	5.05	<.01
Balance Beam (in Feet/sec.)	.62	1.22	.60	15.38	<.01
Obstacle Course (in Time)	67.00	44.10	22.90	8.10	<.01

* df = 9

according to the Sign test, was not significant. It should be noted, however, that the children had a great deal of difficulty completing this test. Four buttons seemed to be too many. Table 2 also indicates that, using the 't' test, the difference between pre- and post-test means on all measures, except lacing, was significant. These analyses suggest that the pupils also made significant gains in the area of fine motor skills.

Performance on the conceptual measures is summarized in Table 3. The degree of improvement, as assessed by the Sign test, was significant for the measure of spatial discrimination, form discrimination (shape sorting and matching) and size discrimination. The 't' tests indicated that the difference between pre- and post-test means was significant only for the measure of spatial discrimination, size discrimination, and matching shapes.

Table 2

Average Pre- and Post-test Performance, in Seconds, on Measures of Fine Motor Coordination

Measure	Mean Score		D	t	p
	Pre	Post			
Put 15 Pennies in Bank	109.30	90.20	19.10	13.26	<.01
Put 20 Pegs in Pegboard	113.00	95.20	17.20	13.99	<.01
Button Four Buttons*	62.29	46.42	15.87	3.95	<.05
Simulated Shoe Lacing^{T}	65.50	48.00	17.50	2.66	>.05

* N = 7
T N = 4

Table 3

Average Pre- and Post-test Performance on Measures of Concept Formation

Measure	Mean Items Correct		D	t	p
	Pre	Post			
Spatial Discrimination	3.40	6.80	3.40	5.85	<.01
Sorting Shapes (Items)	4.50	5.37	.87	1.82	>.05
Sorting Shapes (Sec.)	53.37	35.75	17.62	2.30	>.05
Matching Shapes (Items)	3.20	5.00	1.80	3.25	<.01
Matching Shapes (Sec.)	51.30	45.70	5.60	<1.	>.05
Size Discrimination-Pegs (Sec.)	66.33	42.67	23.66	4.42	<.01
Size Discrimination-Pictures	3.70	7.10	3.40	4.55	<.01

Third Party Evaluator's Comments:

The children involved in this project made, as is apparent, significant gains in the majority of skills tested. Although no control group against which these gains can be gauged exists, the gains appear to be both real and reliable. The degree to which the evaluative measures were related to the objectives and the manner in which the overall program was carried out makes this one of the better, and more successful projects. The planned program, implemented by the staff of this project, is worthy of implementation elsewhere.

Project Number: 85

Preschool Experience for Preschool Children with Speech and Hearing Handicaps.

Group Served: Speech impaired

Project Location: Astoria

Funding Allocated: $1,540

Number of Children Served: 12

Background and Rationale:

This project was designed to serve a group of speech handicapped children for whom preschool experiences were not available. The 12 children served had previously been participants in a special language training program. The purpose of the present project was to further prepare the children for forthcoming school experiences by giving them early exposure to "classroom" activities. A unique feature of this six-week summer project involved the use of a camper pickup fitted as a classroom, permitting "taking the program to the children" in a county-wide area, rather than imposing the requirement of transporting the children long distances upon the parents.

Objectives:

Specific objectives of the project were to provide experiences in:

1. Social and group activities.
2. Introduction of color concepts.
3. Introduction of number concepts.
4. Pre-primary reading exercises.
5. Personal care, including dressing, cleanliness, and safety.

Methodology:

The certified teacher employed by the project followed a regular schedule of twice-weekly visitations at four different locations in Clatsop County, Oregon. At each location, a two-hour program of training in basic tasks designed to assist the child in learning to follow directions, independent work on creative projects, verbal responses, and a play period was carried out. Special attention was also given to the deceleration of behaviors specified by the teacher as inappropriate. Where feasible and appropriate, the children participated in self-recording of their behaviors.

Evaluation Plan:

Two evaluation strategies were employed: a) pre-post test measures were obtained on the Basic Concept Inventory, the Peabody Picture Vocabulary Test, the Meacham Verbal Language Development Scales, and Arizona Articulation Proficiency Scale; and b) "in process" data were taken on the children's behavior during each of the eight visits to each of the four locations. Behavioral dimensions sampled were: 1) finishing tasks; 2) attending; 3) verbal responsiveness; and 4) inappropriate behavior.

In addition to the above data, more subjective ratings of each child's abilities, habits, and social adjustments were made by the teacher.

Results:

Table 1 shows the comparisons of pre-post test measures on the four tests.

Table 1

Overall Test Results

	Average Score				
Test	Pre	Post	D	t	p
Peabody (N=8)	54.88	63.50	8.62	2.64	<.05
Meacham (N=8)	44.00	64.13	20.13	3.18	<.05
Arizona (N=6)	65.58	86.42	20.84	3.60	<.05
Basic Concept Inventory (N=8)	19.50	9.62	9.88	2.91	<.05

The data show that most children demonstrated appreciable improvement on the four tests (the BCI is scored on the basis of errors; therefore, the lower score indicates improvement.) The *t* test for correlated group means yielded significant differences between pre- and post-test measures for the total group of 12 children.

Figure 1 shows the record of data collected relevant to the four behavioral dimensions specified in the preceding section. The data show that, as a group,

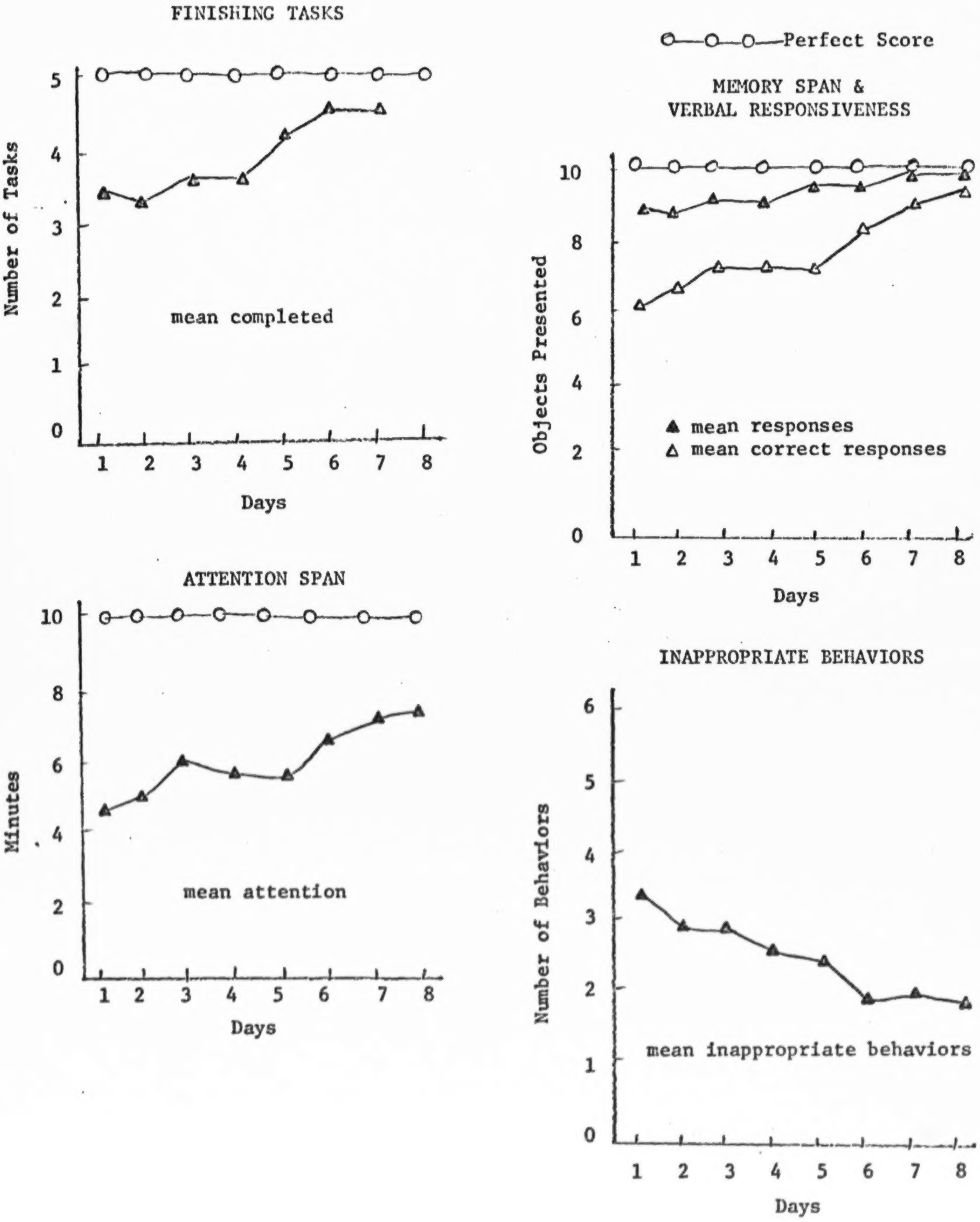


Figure 1 Mean Performance Rate per Day on Four Measures

the children showed consistent acceleration of task completion, attending, verbal responsiveness, and a steady deceleration of inappropriate behaviors. It seems reasonable to conclude that, with respect to the measurement dimensions sampled, the children showed very acceptable progress toward the meeting of project objectives. In the teacher's judgement, considerable variability existed both within and between the individual children across the three specified rating categories.

Third Party Evaluator's Comments:

The evaluation data for this project indicates that, for the group as a whole, the children served manifested gains or improvement with respect to all dimensions of assessment. While the gains in certain areas (i.e., articulation proficiency) are somewhat difficult to account for, inasmuch as specific training related to the types of behavior being measured was not designed into the program, it can be concluded that, to the extent the various measures reflect the children's performance, the program was successful in meeting the objective of providing preschool experience to these speech handicapped children. Further, it might be assumed that these experiences and the children's apparent success with them will serve the second objective of providing them with a greater degree of readiness for successful primary school experience than would be the case for similar children not involved in the summer project.

This evaluator believes that the concept of a mobile classroom may have considerable potential value in many areas such as Clatsop County where services are sparse and the need for such services is great. The apparent success of this short-term summer project would support the viability of further development and expansion of this concept.

Project Number: 86

Summer Program for Deaf-Blind Preschool Children.

Group Served: Deaf-Blind

Project Location: Washington School for the Blind, Vancouver, Washington

Funding Allocated: $11,588.26

Number of Children Served: 12

Background and Rationale:

This project was designed to provide a developmental program to preschool deaf-blind children, many of whom were victims of the 1963-65 rubella epidemic. These children present very unique and difficult developmental problems in that both of the senses critical to the learning process are deficient. Few specialized programs for this type of child are available in the United States. This is the only such program in the Oregon-Washington area. Twelve children were served over a six-week period. A demonstration oriented parent conference program constituted a highly significant aspect of the project.

Objectives:

1. To stimulate growth in the children's ability to communicate.
2. To provide a variety of new environmental experiences.
3. To develop ability to respond to objects and persons in the environment.
4. To develop self-help skills commensurate with ability.
5. To develop motor skills commensurate with ability.
6. To develop improved work habits.
7. To decrease the frequency of stereotypic behaviors.
8. To provide parents with improved skills in interacting with and training their children.

Methodology:

The 12 children (CA 2-7 to 8-6; $\overline{X}$ 5-4) were seen in groups of six for half-day periods. Each child received daily training in orientation and mobility, physical development, and self-care skills. Daily activities included feeding, toileting, walking (or early approximations of walking), play with various educational toys and games, and recreation activities. These activities were conducted and supervised by teacher aides. In addition, qualified teaching staff worked with the children daily in pre-language training involving specific exercises designed to develop (a) "attending" responses to various visual, auditory, and tactile stimuli, and (b) communicative responses. Precision teaching techniques were employed in these two areas, using both physical (e.g., bright light) and social reinforcers. In all phases of the program, particular attention was given to maximizing the use of residual vision and hearing; the latter typically occurring with the help of electronically amplified sound.

Special weekly parent conferences were held. A variety of lectures and discussion topics and demonstrations of program activities were used. These activities oriented the parents to the special problems of their children and provided them with skills in child management and training appropriate to the case of combined visual-auditory handicaps.

Evaluation Plan:

Daily anecdotal records were kept for each child by both teachers and teacher aides, covering all activities provided the child. In addition, weekly progress summaries and an overall summary of benefits accrued by each child were proposed. Precision teaching data in the form of the number of "attending" and "communication" responses emitted during a specified interval of time were collected by the teachers on each of a variety of stimulation procedures.

A developmental check list which had been used in a previous project was used to obtain data on basic skill and ability dimensions. These ratings were obtained prior to, during, and after the project. Evaluative comments relative to five qualitative areas of the program functions were obtained from the parent at the termination of the project.

Results:

The daily anecdotal records generally indicated improvement for most children in relation to the activities programmed by both teachers and teacher aides. Of course, these records provide only subjective indices of the children's progress and are not usable as empirical evidence of change. Their greatest value is probably seen in the descriptions of the daily activities each child received. Space does not permit a summary of this information here.

Pre- and post-test scores on the Developmental Check List are presented in Table 1. The greatest gain for the children as a group occurred in the area of work habits. Most of the gain here is attributable to only three of

Table 1

Average Pre- and Post-Test Scores on the Developmental Check List

Area Rated	Average Score		t	p
	Pre	Post		
Self-Care Activities				
Toilet	2.64	2.77	1.54	>.05
Eating	2.90	3.24	1.89	>.05
Grooming/Dressing	1.73	1.86	1.16	>.05
Motor Skills	3.75	2.70	2.15	>.05
Work Habits	2.46	2.67	3.08	<.05
Social Relations	3.67	3.62	<1.00	
Communication	2.23	2.24	<1.00	
Stereotyped Activity				
Auditory	1.48	1.55	<1.00	
Motor	1.64	1.63	1.83	>.05
Visual	2.18	2.11	<1.00	

the 12 children. The data for individual children showed that most of the children evidenced some gain relative to most of the areas of assessment, although some regression was indicated for some children. There appeared to be no consistent pattern of gain or loss represented for the group as a whole, however. Empirical evidence of the effects of the activity program, as measured by the developmental checklist, were not demonstrated in consistent fashion.

Data representing the children's emitted behaviors measured in terms of "attending" and "communication" were expressed in terms of rate per minute of emission of the appropriate behaviors during timed "stimulation" sessions. These data were collected according to the precision teaching model wherein specific stimulation (anecdotal events), child responses (movement cycles), and assumed reinforcers (subsequent events) are specified in planning each activity. Again, as with the data obtained relevant to the developmental checklist, the precision data were extremely variable, both with respect to individual children and for the group as a whole. However, in this case the variation is probably a function of the fact that each child received many different "stimulation" activities relative to each of the two generic behavior classes, each activity apparently characteristically producing different rates of responding. Since these different activities were programmed at different periods during the duration of the project, and apparently few of the specific activities were programmed in the same way each day of the project, it is not possible to draw precise conclusions relative to program effects as measured by the precision teaching data.

A final set of evaluative information was provided in the form of parent responses to five questions related to the effectiveness of the program, its value to the parents, and suggestions for change of improvement of the program. These responses were not rated. In general, parental responses to the program were highly favorable. More specifically, it appears that the parents see particular value obtained from increased understanding of their children and the problems produced by their handicapping conditions, as well as the learning of specific techniques for assisting their children in their development.

Third Party Evaluator's Comments:

There can be little doubt that this project has served a significant need relative to the unique handicapping conditions of the children served. Early stimulation and motor training of such children can certainly be assumed to be of benefit to them. It is indeed unfortunate that, in spite of the diligent efforts of the staff to systematically produce empirical evidence of the effects of their program, no clear cut evidence of the benefits derived by the children were forthcoming. This evaluator is inclined to attribute this outcome to two factors: a) the lack of sensitivity of the measures obtained on the developmental checklist, and b) the fact that the precision teaching programs were not designed in such a way that exact, precise duplication of activities were consistently programmed each day for each of the children. In the former case, the developmental checklist employed simply had too much "ceiling" for the children with which it was used, and was not sufficiently sensitive (i.e., lacked discrete items) at the lower end of the scale wherein most of the children fell. In the latter case, the differing activities programmed relevant to the two principle classes of "attending" and "communication" behavior produced too great a degree of variance in the response rate measures to permit a precise, meaningful combination of data requisite to an analysis of behavior change.

It is strongly recommended that future projects of this type (i.e., serving extremely limited children for whom a slow rate of change is predictable) make every effort to effect an optimal utilization of the precision teaching evaluative strategy.

Project Number: 89

A Language and Speech Development Program for Deaf Children

Group Served: Deaf

Location: Regional Facility for the Deaf, Portland

Funding Allocated: $2,784.00

Number of Children Served: 15 Preschool, 13 Secondary

Background and Rationale:

The purpose of this four-week summer project was to provide appropriate speech and language training to children of two different age groups, preschool children four years of age or younger, and adolescents between 14 and 18 years of age. All children participating in the program were certified as being deaf. The instructional programs employed were based upon the Experimental Language Method, which utilizes oral instructional techniques, including speech reading.

Objectives:

The general project objective, as stated in the original proposal, was to "provide educational facilities to meet the needs of each individual child so that he can compete in a hearing world to the best of his ability." More specific objectives were later listed in a letter to parents as follows:

1. Physical Development: Good health habits were stressed while helping each child to become more capable of relaxing and developing independence in caring for personal needs. Exercises to develop muscular coordination were practiced.

2. Social and Emotional Development: Group activity involving eight children of similar age was provided in order to give each participant opportunity to develop leadership qualities, consideration of others, as well as observation of acts of kindness, helpfulness, and courtesy.

3. Mental Growth: In order to increase learning skills, the following were stressed: watching attentively; the following of directions; neatness; completing tasks; and putting away of materials.

4. Each child was helped to better express himself freely and creatively by means of a variety of language, music, and art activities.

Particular training objectives were determined on an individual basis for each child on the basis of preliminary diagnostic evaluations.

Methodology:

Two groups each of preschool and secondary level children received three hours of training daily over the four-week period. Specific activities for the preschool groups included speech therapy, creative projects, and play activities. Speech training was given both in group and individual sessions.

Specific training activities were not indicated for the adolescent groups, although it is apparent that the program emphasized the development of written language skills.

Evaluation Plan:

Plans for evaluation were to include pre-post test measures on phonetic analyses, a comparison of tape recordings of the children's speech prior to and following the program, and pre-post test comparisons of the adolescent groups' responses to the Myklebusts Picture Story Language Test.

It was later determined that the use of taped speech records was unfeasible due to the inordinate amount of time requiredfor analysis. The Myklebust Test was not available for pre-testing, hence pre-post test comparison could not be made with this instrument. Data pertaining to phonetic analyses were not provided.

The data provided the evaluators consisted of pre-post ratings on a general language evaluation form apparently constructed by the project staff, and, for the adolescent groups only, pre-post ratings on a "spontaneous written language evaluation" form. Anecdotal evaluative comments were also provided for each child.

Results:

The general language ratings and the anecdotal information indicated that some improvement was observed for most children. These data, however, are non-numerical and do not lend themselves to an empirical analysis of change (or improvement). Data for the spontaneous written language evaluation were represented in a composite score based upon ratings of language usage and sequencing. The derived scores were judged to have content validity and to effectively represent the students' performance with respect to the variables assessed. Table 1 shows a comparison of pre-post test differences for these ratings. As can be seen from the table, six children showed gains, two earned lower scores on the post test, one earned approximately the same score, and three could not be included due to having missed one of the testings. Analysis of the significance of differences using the Sign Test

Table 1

Comparison of Pre-Post Test Scores Obtained by the Adolescent Groups on the Spontaneous Written Language Evaluation

Subject	Average Score	
	Pre	Post
1	78.7	96.6
2	39.1	73.2
3	23.4	54.3
4	37.2	45.7
5	24.5	43.8
6	40.8	28.0
7	----	25.9
8	----	24.6
9	19.4	23.4
10	43.0	23.0
11	20.7	20.0
12	25.6	----

indicated that the distribution of differences were non-significant ($p=.29 > .05$).

Third Party Evaluator's Comments:

Although project staff concluded that the project had the desired impact, there is little in the way of conclusive evidence of the effectiveness of this project that can be reported. Many of the proposed measures were either not used or were not available due to circumstances beyond the control of the project staff. Excepting the "sponanteous written language evaluation," the information provided was largely subjective and non-numerical and was not suitable for empirical analysis. This is a very unfortunate outcome, since it is obvious that the staff invested considerable time in the attempt to provide evaluative information.

Project Number: 91

A Comprehensive Program for the Introduction of School-Related Behaviors for Retarded Pre-school Children; and the Development of a Transitional Recreation and Leisure Time Program for Primary and Teenage Trainable Mentally Retarded and a Select Group of Educable Mentally Retarded Children.

Group Served: Trainable Mentally Retarded and Educable Mentally Retarded

Project Location: Eugene (Pearl Buck Center)

Funding Allocated: $8,288.18

Number of Children Served: 56

Background and Rationale:

The project provided "acquisition prosthetics" in two problem areas typically encountered by mentally retarded children. Acquisition prosthetics refers to the acceleration of deficient responses up to regular levels. That is, specific behaviors occurring at a low rate (frequency) are systematically strengthened so as to produce a high rate.

The first problem area was "developing recreational skills to such a degree that the performance of the retardate is comparable to a normal 'regular' child." Unless the abilities to participate are approximately equivalent, the less-abled child would tend to be excluded from the activity; inadequate attempts would probably not be rewarded. Non-reinforced behaviors decrease in frequency until they may no longer occur at all.

Oftentimes recreational programs for the handicapped are modified to such a degree that an environment is created in which the behavior does not appear to be retarded. Typically, emphasis is placed on those skills and activities which require supervision; thus dependencies on adults are created. Such modifications of recreational programs tend to prohibit the retarded child's becoming able to participate in the usual community and neighborhood activities. Therefore, this project attempted to develop an exemplary program designed to provide acquisition prosthetics in recreational skills for mentally retarded children.

The second problem area was "developing those behaviors in pre-school mentally retarded children which are considered requisite for acceptable classroom participation." Oftentimes children are labeled as being "not ready for school" because of perhaps a "developmental lag" or simply "being too immature." The conclusion becomes: "Wait until he is ready."

Recent research results suggest very young and even severely intellectually limited children can learn many behaviors in a relatively short period of time. Rather than "wait" until the child is ready for school, it would seem possible to "make" the child ready. Therefore, this project is an attempt to develop an exemplary program designed to provide acquisition prosthetics in pre-requisite school behaviors to young trainable mentally retarded children.

Objectives:

1. To select a number of behaviors (skills) representative of recreational activities; and then create the greatest amount of behavioral change (acquisition of the skill) in the shortest period of time.

2. To select those behaviors, for the pre-school subject group, considered by teachers to be requisite for acceptable classroom participation and to create the greatest amount of behavioral change (acquisition of skill) in the shortest period of time.

3. To decelerate (decrease in frequency) problem behaviors which are considered incompatible with acceptable classroom participation.

Methodology:

Both sub-project groups (Primary-Adolescent and Pre-school) used the behavioral analysis strategy, outlined in Ogden Lindsley's "Precision Teaching," to determine teacher-effectiveness by evaluating the daily performance rates of each student. The steps in precision teaching are:

1. Pinpoint the target behavior.

2. Record the number of responses within a time interval.

3. Compute the response rate (number of behaviors/elapsed time).

4. Chart the response rate (six-cycle logarithmic daily graph).

5. Accelerate or decelerate the target behavior in the desired direction.

6. Continue or change the plan until the desired change has been achieved.

Lindsley's "Precision Teaching" employs a notational system to describe those components which potentially effect behavior change ("Is"--equation) and also those components with which a functional relationship to the behavior has been established ("Does"--equation). The present project used this "Is-Does procedure." A daily behavior chart (six-cycle logarithmic grid) was used to plot the response rate. This chart provides display of a very wide range of response rates: one response in 1,000 minutes (.001) up to 1,000 responses per minute (1,000.).

Recreational activities taught to the primary and adolescent youngsters were selected from the rated inventory administered during the first two days. The children were then separated into four groups, comprising the full range of performance rates, so that each group had an individual from each quartile range. Each group learned a different set of recreational skills; however, all students participated in a one-hour swimming class on Tuesdays and Thursdays.

Information was also secured on the performance rates of intellectually normal children by administering a rated inventory to ten "regular" youngsters. The "middle" performance (median and range) of this group of normal "regular" children served as the acquisition performance criterion for training the retardates. Subsequent reference to the performances of the regular group will be termed "regular" middle.

The pre-school program was organized in a manner similar to a cooperative nursery school. The pupils' mothers participated in the classroom under the direction of trained staff members. Each mother worked once a week.

Each set of parents was also committed to working with three projects (with their child) at home. The one and one-half hour weekly parental training sessions were directed toward instruction in the same "Precision" techniques being used by the teachers--pinpointing, recording, charting, etc. Subsequently, parents worked with their child's problem behaviors in terms of home-school projects.

Rated inventories were given to the children during the first week of the pre-school program. At that time it was discovered several of the youngsters already possessed those skills identified as "prerequisites for school." Therefore, the pre-school group was subdivided into "pre-nursery" (skills prerequisite for school) and "pre-primary" (skills prerequisite for a primary school class).

Evaluation Plan:

As noted earlier, all student target behaviors were recorded on a continuous daily basis as specified by the precision teaching strategy. Response rates were computed and charted. An evaluation of the performance rates provides an indication of program success. This project presented summaries of all the data in terms of group "middles" (i.e., medians and ranges). To make a statement concerning behavioral changes, a data shift representing an increase in performance rate was expressed as a "times" change; whereas a decrease in performance rate was expressed as a "divides" change. For example, if a student's behavior from one movement per minute to two movements per minute, the child would have doubled his rate. This would be described as a times two (X 2) increase. The converse would be true - a decrease was described as a divides two (÷ 2) decrease. All data were summarized on equal proportion grids (six-cycle logarithmic graphs). With this graph, all behavioral changes, no matter how high or low, are seen as proportional to one another.

The analysis was basically made with the use of ranges, middles, and semi-interquartile ranges.

A statement regarding the relative change (i.e., comparison) of performances would be based on middles. An example is provided by the performances on the "bringing kindling" skill. The performance of the retardate was 1/58th the rate of the regular student prior to training. The difference between the regular middle (prior to training) and the retardate middle (after training) was a divide 3.0. The relative difference between the retardate's performances, before and after training, is a times 23.0. The latter relative change statement notes that the retardate performance rate was 23 times greater after the skill training on "bringing kindling."

Results:

The results of this project were displayed in a variety of unique figures. Numerous interesting illustrations which displayed a variety of comparisons of "regular" middle to "retardate" middles (before and after training) were provided in the final report. Other figures were presented which illustrated reductions in error rates of the retardates after training. The data from this project were so complete and of such a magnitude that even summary reproductions are impossible. The reader is encouraged to obtain a copy of the final report from the project director.

It was concluded from the analysis of data that not only did acquisition occur; but also it was demonstrated that the "retarded" students did almost as well or, in some instances, better than the criterion of the "regular" middle. It must not be construed, however, that these retarded students are now able to participate in regular recreational activities. Yet, within only a four-week period, marked improvements were apparent in many of the representative prerequisite skills necessary for independent recreational activities.

The results of the pre-school (Prerequisite Skills) sub-project were also presented in summary charts. It was noted by the summary charts that a number of problem behaviors (e.g., talks out, touches others) teachers oftentimes feel are critical to school-related behaviors did not seem to occur. This finding suggests teacher assumptions about a child's behaviors (i.e., assumptions based on estimation of past experiences) do not necessarily reflect the current actual situation. Those behaviors, selected as prerequisite for classroom participation, did increase in rate; such was illustrated in the summary charts.

Third Party Evaluator's Comments:

The magnitude of this project was as impressive as were the results. The staff members were involved with 56 children and about 50 different skills to be trained. Each child was instructed on several behaviors. The response rate for each target behavior was computed and charted daily; this procedure produced one "data point." It was reported by the project director that approximately twenty thousand data points were obtained during this project. The data were analyzed by the computer at the University of Kansas, which is programmed for such unique data.

The final report prepared by the project staff was truly comprehensive. The data were displayed and comparisons were made in unusually interesting and uniquely different styles. Because many terms used in the report would be unfamiliar to most readers, a glossary was provided. A criticism of the report itself refers the arrangement of the discussions and material presented; the report appeared somewhat disjointed.

The precision teaching strategy used during this project provided procedures to pinpoint, record, compute response rate, etc. Discussions of the actual learning environment were limited to grouping, activities, scheduling, movement of students, and so forth. If this project, or any portion of it, were to be replicated at some future date, undoubtedly the staff would give considerable attention to the technology of teaching or the arrangement of those conditions most suitable for learning. Quite likely, even greater behavioral changes would be obtained. The foregoing statement most certainly was not intended to belittle the present project. Quite the contrary is noted; the results provide very substantial support for a favorable judgement as to the success of the project.

Project Number: 92

A Program Utilizing Music as the Basic Media of Instruction for the Trainable Mentally Retarded and Multiply Handicapped

Group Served: Multiply Handicapped and Trainable Mentally Retarded

Project Location: Redmond

Funding Allocated: $9,330.00

Number of Children Served: 19

Background and Rationale:

The staff of this project observed that trainable and multiply handicapped children respond in a natural and positive way to music; passively in listening and actively in body response and rhythmic gestures. As a result, they became interested in how music could be used as a motivating tool to learning.

In order to prepare a well-balanced program of instruction, two already developed musical techniques were synthesized. They were Richard Weber's "Musical Technique" and Janet and Ferris Robbins' technique of "Rhythmics to Music." The two combined approaches were utilized to facilitate development in the areas of attention span, visual and directional perception, and physical fitness.

Objectives:

1. To provide a balanced instructional program, which utilizes music as the media for learning, for multiply handicapped and trainable retarded children.
2. To compare the music techniques with two additional standard teaching methods in terms of their effect on learning in the areas of attention span, visual perception, directional perception, and basic physical fitness.

Methodology:

Seven children were randomly selected from a group of 22 multiply (CA 4-10 to 26-3; $\bar{X}$ 14-8) handicapped and trainable retarded children and assigned to the music program. The remaining 15 students were divided into two groups and assigned to two regular special education classes in which standard teaching methods were applied.

The music group attended class approximately five days a week, six hours a day for 12 weeks. Their program was highly organized and built around the two music techniques. The musical or keyboard technique is one in which the person learns to play the piano by matching pictures of geometric figures on the keyboard with the ones on the music sheet. In essence, by matching the arranged symbols on the melody sheet with the corresponding symbols on the keyboard, one is able to play a melody on the piano. Each child engaged in three sessions a day in which this technique was used.

The rhythmic technique allows the child to experience various body motions in a rhythmic fashion. It also allows the children to express themselves freely. The music group received one hour of this technique a day.

Evaluation Plan:

The outcome criteria used to evaluate the effects of the music program, as compared with the standard teaching methods, were attention span, visual perception, directional perception, and physical fitness. Pre- and post-measures were taken on the following tests selected to assess the above four areas:

1. Three tasks were self developed to assess visual, auditory, and activity attention span. The visual task was to look at a movie without sound. The child's score was the number of seconds he attended to the film. The auditory task consisted of listening to music with closed eyes and attention span was measured in terms of number of seconds the child attended. For both of the above tasks, the children had a push-button switch with which to stop the projector and tape recorder when they were through seeing or listening. The activity task consisted of a pendulation device with which the child was to play with as long as he wished. The score was also the number of seconds he attended to the task.

2. Frostig Developmental Test of Visual Percention.

3. Three subtests from the Parsons Language Sample Test, i.e., Echoic, Echoic Gesture, and Comprehension.

4. Hayden's Test of Physical Fitness for the Mentally Retarded.

Results:

Seven children were randomly drawn from a population of 22 trainable and multiply handicapped children and assigned to the experimental music program (Group I). The remaining children were assigned to one of two regular special education classes which comprised the two control groups (Groups II and III).

The sign test was used to determine the significance of change between pre- and post-measures on four tests for each of the three groups. There were no significant changes on the three attention span tests for any one of the three groups. Table 1 shows that for the Test of Directional Perception, the experimental group had significant changes on Echoic Gesture and Comprehension and control group II also showed a significant gain on comprehension.

Table 1

Significant Differences Between Pre- and Post-Measures on the Test of Directional Perception for Each of Three Groups

Measure	Group I	Group II	Group III
Echoic	NS*	NS	NS
Echoic Gesture	S**	NS	NS
Comprehension	S	S	NS

* There was no significant difference (NS) between pre- and post-measures on the Echoic subtest of Directional Perception for Group I.

** There was a significant difference (S) between pre- and post-measures on the Echoic Gesture subtest of Directional Perception for Group I.

The total scores for the remaining two tests, Frostig Developmental Test of Visual Perception and Hayden's Test of Physical Fitness, reflected no significant increase for any one of the three groups.

The second objective was not met according to these findings. However, the results only indicate that the music program did not have a significant effect on the experimental group in terms of their attention span, visual and directional perception, and physical fitness as measured by the selected tests. When taking into account the limited sample size, the nature of the selected tests, and the limited number of dependent 'learning' variables, one must be cautious in drawing any conclusions about the value of the music technique(s) as a media to basic learning. The primary objective was well met, inasmuch as an innovative and well-balanced instructional program, which utilized music as the media for learning, was provided.

Third Party Evaluator's Comments:

The project staff is to be commended for using control groups in an attempt to better evaluate the effectiveness of the experimental program. Even though the second objective was not met, the results should not preclude further investigation of the music technique as a media to learning. The staff of this project is to be recognized for their effort to search for a more effective way in which to teach the trainable and multiply handicapped child.

Project Number: 93

Aloha Physical Fitness and Recreation Program

Group Served: Trainable Mentally Retarded

Project Location: Aloha

Funding Allocated: $4,376.00

Number of Children Served: 30

Background and Rationale:

This project is a follow-up and extension of the 1968 Aloha physical fitness and recreation program, which was also a Title VI project. The present project operated for a total of eight weeks during the summer months. Twenty-one children were repeaters from the preceding year's project, and an additional five children had been enrolled in the immediately preceding school year program. The remaining three children were new enrollees this summer. In addition to several paid full and part-time staff, the project made extensive use of high school age volunteers who functioned both as trainers and evaluators, and who made it possible to provide individualized training for most of the children enrolled in the program.

Objectives:

The objectives for the 1969 program were:

1. To refine the instrument used for testing in 1968.
2. To measure improvement in physical fitness occurring during the past year.
3. To individualize a fitness program for each child to help him develop in the following areas:
    a. arm and shoulder strength
    b. leg strength
    c. back strength
    d. abdominal strength
    e. posture
    f. endurance
    g. flexibility
    h. spatial relationships
4. To develop in each child, as far as his capability permits, skills that will enable him to be a more active participant in family recreation.
5. To give each child, according to his ability, an opportunity to develop self help skills in dressing and caring for his clothing through daily preparation for gym activities.

Methodology:

The first week of the program was given to a period of planning by project staff and orientation and training for high school aged volunteers. The second week was then devoted to pre-testing each child on a battery of seven physical fitness test items, posture, swimming skills, and other performance areas.

Pre-program evaluative data were then used to plan individualized programs for each child. The general activity schedule for all children included:

1. dressing for gym
2. small group gymnastics (45 minutes)
3. outside running and ball throwing activities (15 minutes)
4. outdoor game activities (30 minutes)
5. remediation of specific skill deficits (20 minutes)

The third week of the project constituted an "accommodation period" during which the individualized programs were implemented and perfected and the children became familiarized with their routines. The established programs were then maintained for the succeeding four-week period. Weekly measures were obtained on the children's performance on the seven physical test items during this time, with the data being used to track the children's progress and pinpoint remediation targets.

The final week of the project was given to post-testing, at which time each child was again evaluated on behavior dimensions described previously.

Throughout the program, special emphasis was given to the development of confidence in the children, as well as the stimulation and development of various social skills; although the effects of this training are not directly reflected in the evaluative measures to be described in the following section.

Evaluation Plan:

The principle instrument employed in the evaluation schema was developed from a representative battery of physical fitness test items employed in testing the preceding year. The instrument consisted of a total of seven items drawn from three sources: a) Oregon Motor Fitness Test; b) Hayden Physical Fitness Test for the M.R.; and c) the AAHPER Fitness Test Manual for the M.R. The items were as follows:

1. Hang for time, administered according to the Hayden manual
2. Medicine ball throw, taken from the Hayden manual

3. Standing broad jump, as recommended by AAHPER
4. Fifty yard dash, as recommended by AAHPER
5. 300 yard run-walk, as recommended by AAHPER
6. Soft ball throw, as recommended by AAHPER
7. Sit-up, as recommended by AAHPER

Items one through five were unchanged from the preceding year, while item six was added this year. Item number seven was modified to permit the child to fold his arms across his chest and assume a position with knees bent to reduce the amount of stress upon the lower back imposed by the standard sit-up method.

In addition to the above measures, pre- and post-program ratings were made of the children's swimming skills and posture, and running time measures were taken on the children's performance in an obstacle course.

Results:

Tables 1 and 2 show the distribution of physical fitness test pre- and

Table 1

Pre-post Test Comparisons on Physical Fitness Test Items for Female Participants

Test Item	Average Score		D	t	p
	Pre	Post			
50 Yard Dash	17.65	12.73	4.92	5.25	<.01
300 Yard Dash	147.00	94.92	52.08	6.56	<.01
Soft Ball Throw	17.15	24.92	7.77	7.27	<.01
Sit-ups	6.76	19.76	13.00	8.03	<.01
Hang Time	6.38	18.46	12.08	4.00	<.05
Medicine Ball Throw	61.76	101.00	39.24	9.48	<.01
Standing Broad Jump	13.19	23.07	9.88	6.12	<.01
Obstacle Course	300.63	212.09	88.54	<1.00	>.05

Table 2

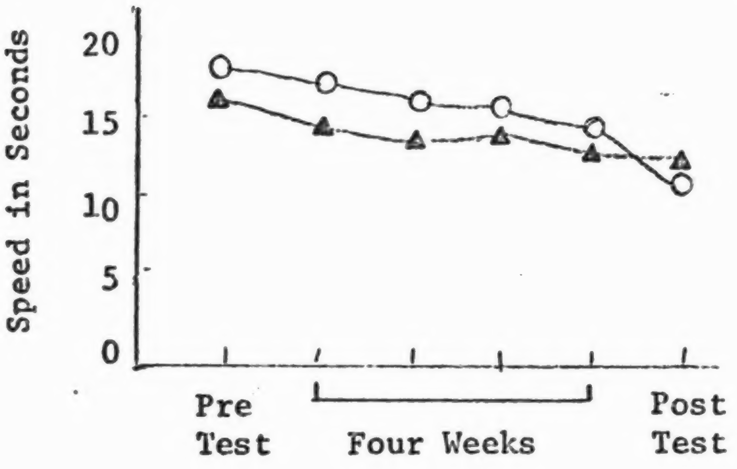
Pre-post Test Comparisons on Phsycial
Fitness Test Items for Male Participants

Test Item	Average Score Pre	 Post	D	t	p
50 Yard Dash	15.00	11.82	3.18	3.17	<.05
300 Yard Dash	42.12	23.64	18.48	4.80	<.01
Soft Ball Throw	32.60	48.13	15.53	3.89	<.05
Sit-ups	9.13	22.80	13.67	7.67	<.01
Hang Time	17.74	25.20	7.46	3.31	<.05
Medicine Ball Throw	80.60	122.86	42.26	5.59	<.01
Standing Broad Jump	19.60	29.13	9.53	13.43	<.01
Obstacle Course	309.00	131.75	177.25	5.35	<.01

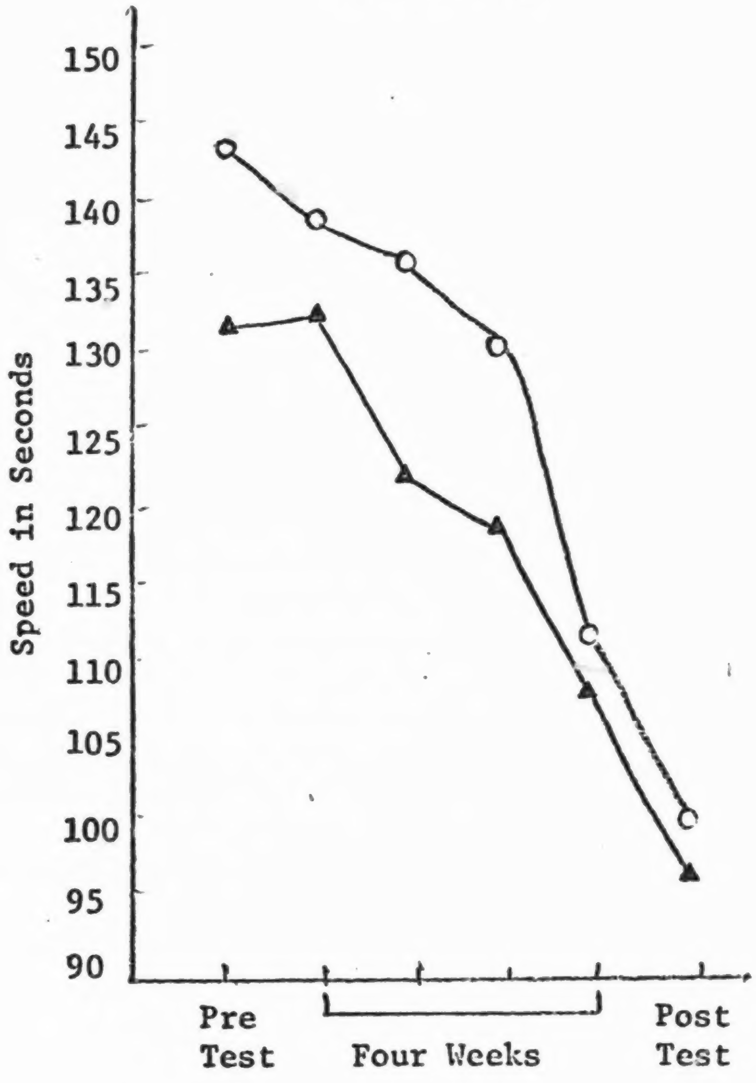
post-test measures for female and male children respectively. It is apparent that most children demonstrated some change in performance as reflected in these scores and that changes were generally in the desired or predicted direction. This trend is also reflected in the group measure. The test for correlated means indicated that there were significant differences between pre-post test measures on all but one of the items.

Figure 1 provides a record of the average group (males and females) rate of improvement on the seven variables assessed on a weekly basis. In most cases, it can be noted that a steady increment (or decrement, in the case of the 50 and 300 yard dash) occurred over the six-week period of the program, and the attainment of asymptotic performance levels are not evident. From this one can conclude that improvement occurred at a fairly constant rate for the total group of children on all physical fitness tasks and, as a group, their performance had not reached the level of their physiological and functional limits prior to the termination of the program.

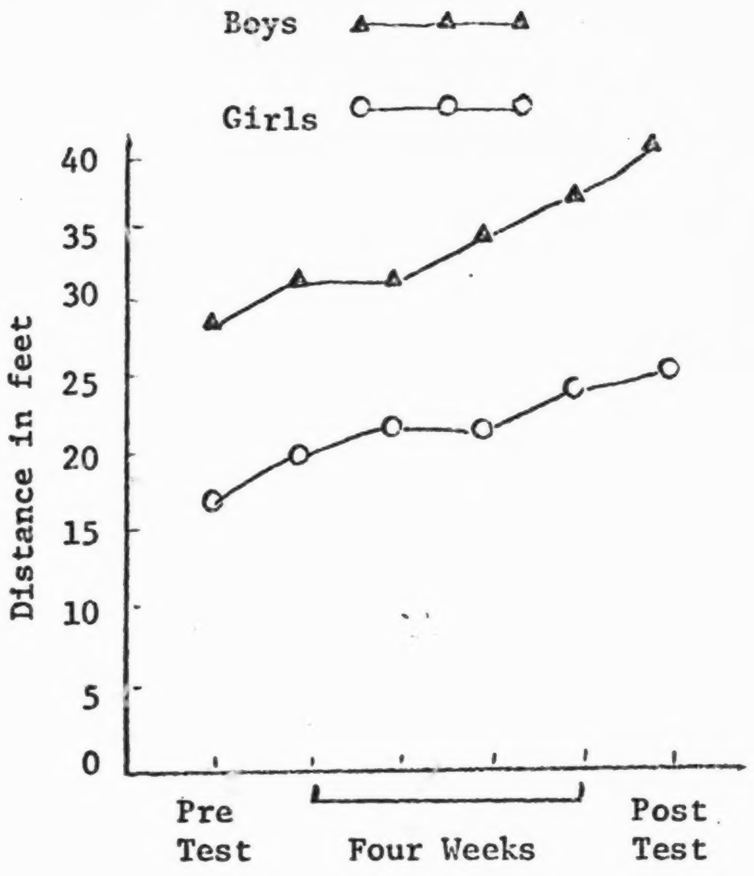
Data provided for the pre-post posture test ratings fail to meet the basic assumptions of statistical analysis; therefore, it is not possible to describe the magnitude of posture change in terms of statistical significance. However, given that a higher rating reflects "poorer" posture, it can be stated that



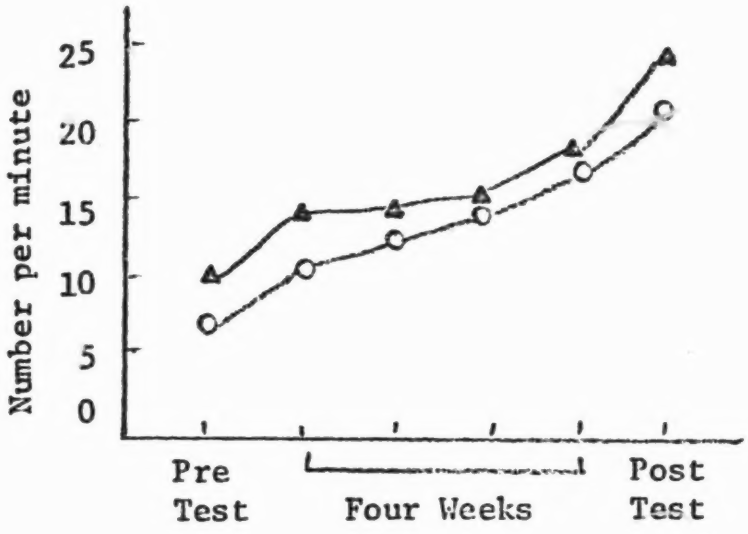
50 YARD DASH



300 YARD WALK-RUN

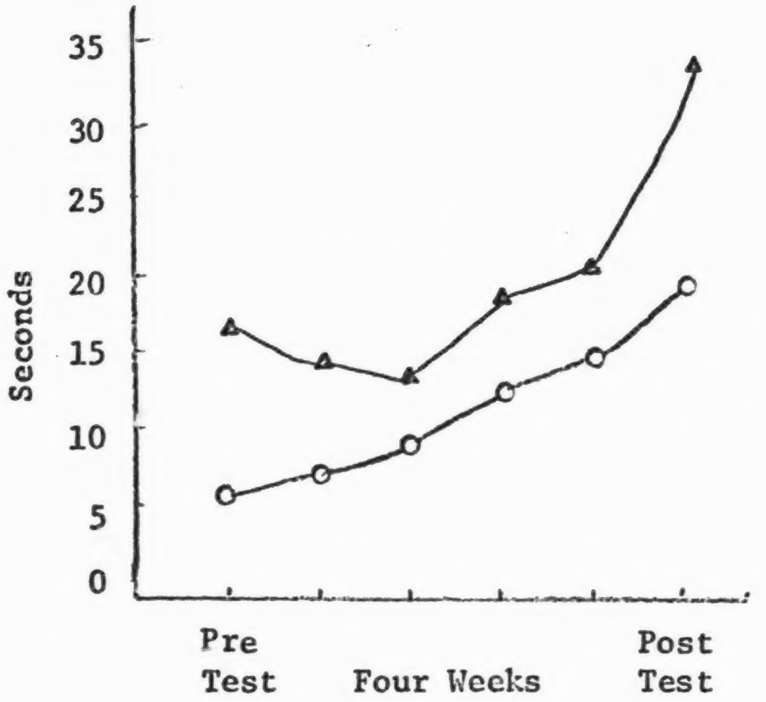


SOFT BALL THROW

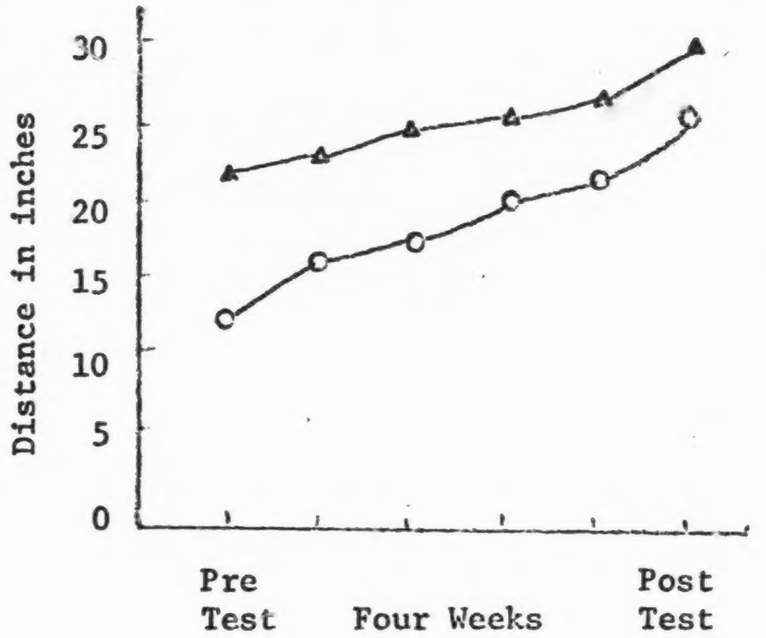


SIT UPS

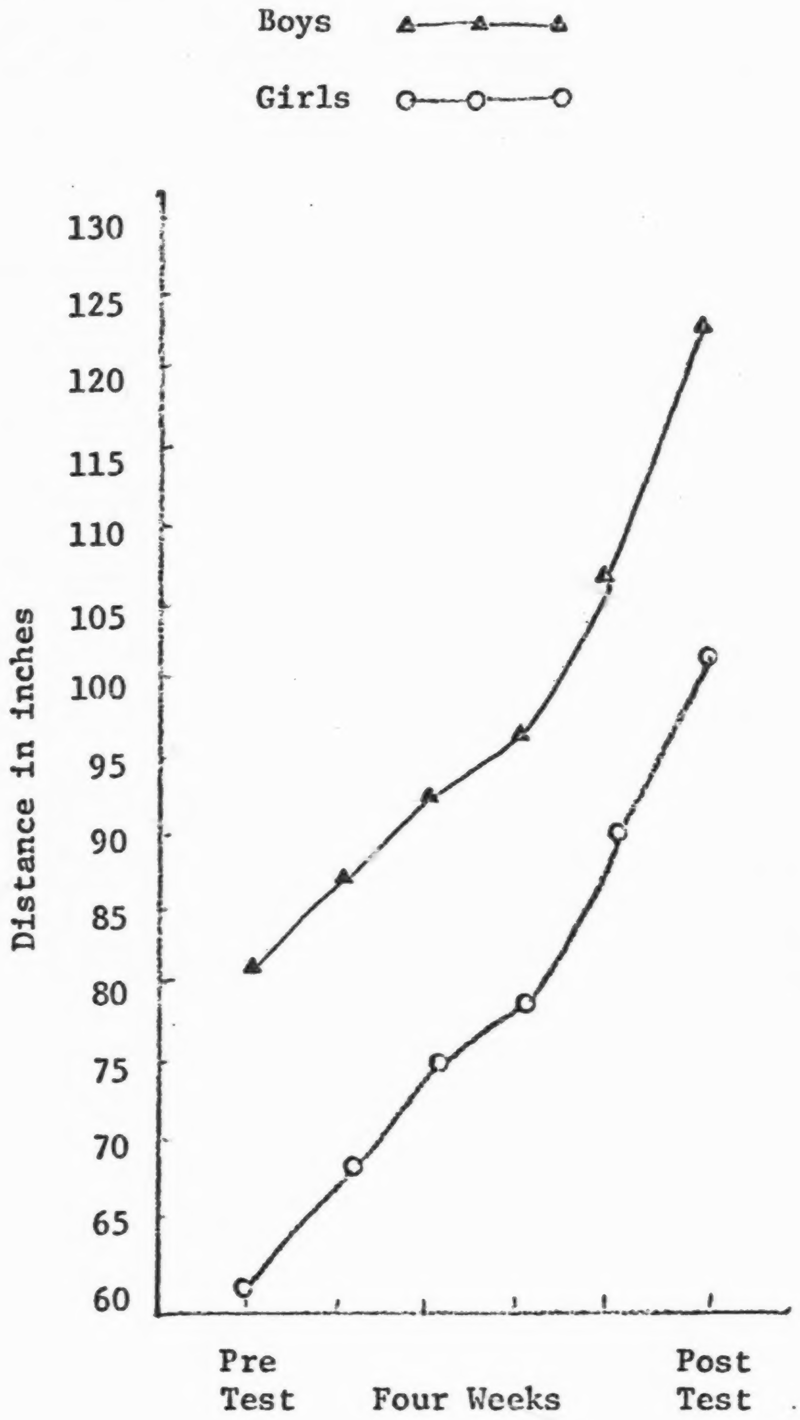
Figure 1 Distribution of Group Mean Scores on Weekly Physical Fitness Measures for Males and Females



HANG TIME



STANDING BROAD JUMP



MEDICINE BALL THROW

Figure 1 (continued) Distribution of Group Mean Scores on Weekly Physical Fitness Measures for Males and Females in general the children demonstrated improved posture, as measured by the particular rating technique employed. However, the data were highly child specific and quite variable; therefore, one would hesitate to conclude that posture in the group was "improved" as a function of the training program.

Data describing the improvement of swimming skills were non-numerical and were judged to be unsuitable with respect to empirical evaluation of such improvement. However, it can be stated, in summary fashion, that most children acquired at least one specific skill in addition to those in their repertoire at the initiation of the program. Approximately 90% of the children in the basic program acquired two additional skills, and approximately 20% added at least three skills to their repertoire.

Third Party Evaluator's Comments:

It seems reasonable to conclude that this program was successful in that most children demonstrated improvement over the five-week activity period. The conclusion that the program was successful assumes, of course, that the same rate of improvement would not have occurred had the children not had the benefit of the program. Since no contrast or control group was available, this is an unknown; however, the evaluator is willing to adopt an assumption in favor of the value of the program to the children's development.

Project Number: 99

A Language, Recreation, and Social Skills Summer Program for Hearing Impaired School-age Children.

Group Served: Hard of Hearing

Project Location: Medford

Funding Allocated: $4,290.00

Number of Children Served: 7

Background and Rationale:

Many children who would have been classified as "deaf" several years ago are currently classified, frequently, as "hard-of-hearing." This is due to advances in providing pre-school language training and in the use of individual hearing aids. These "hard-of-hearing" children are placed, in Jackson County, in the regular classroom.

Although hearing impaired children receive speech therapy, they do not, as part of the regular classroom curriculum, receive intensive language stimulation. In evaluating these children, it is clearly evident that while their hearing level is raised by the use of hearing aids, many are still language handicapped. As such they are in need of an intensive language development program which should be offered not only during the school year but also during the summer.

Objectives:

1. To inaugurate a language training program for Jackson County's hearing and language handicapped children.
2. To stimulate the language ability of a group of school-age hearing impaired children.
3. To stimulate the social growth of a group of school-age hearing impaired children.

Methodology:

Seven hearing impaired children (CA = 7-8 to 13-2) were enrolled in the summer program. The children participated in planned activities at the Rogue Center for Hearing and Speech and through the Medford City Parks and Recreation Program. In the recreation program the children participated in baseball, swimming, and planned playground activities. These activities were used by project staff (a Certified Teacher of the Deaf and several teacher aides) as natural motivators for speech and language training activities.

Approximately two hours per day were devoted to the language development program. The focus of activity during this time was on (a) the development of experience charts about activities in which the children engaged; (b) vocabulary development including drill on proper pronunciation, usage, and spelling; and (c) speech skills. Participation in Medford City Park and Recreation activities was an important part of the program. This participation provided not only experiences upon which to build language activities but also contact with hearing youngsters in novel, social situations.

Evaluation Plan:

Accomplishment of the objectives was assessed using pre- and post-program tests. At the beginning and the end of the program, each child was presented with a picture(s) about which he was to tell a story. These stories were tape recorded and transcribed. From the transcription, the total number of words used by each child, the total number of sentences, and the number of instances of the parts of speech used by the children were determined. Each child was administered a standard articulation test both prior to and after the program. The teacher rated the child's social skills on the basis of a 26 item instrument designed for the project. Test items were scored on a Likert five-point scale. Social skills were also assessed on a pre- and post-program basis. In addition, the number of social contacts made with hearing children by the child during a timed (usually 15 minute) interval were recorded once a week.

Results:

With respect to social skills, the children enrolled in the project received, on the average, a pretest score of 3.54 (5 is high and desirable) and a posttest score of 3.77. Although the scale shows that the children were rated as exhibiting improvement in social skills, the amount of increase was not sufficient to warrant testing the significance of the difference between the means. The Sign test indicated that the probability of six of the seven children evidencing improvement was less than chance ($p = <.05$) and, therefore significant. The frequency count of contact with hearing children did not prove to be amenable to analysis due to fluctuations due to the nature of the activity, duration of timing, etc. The children did experience, in the opinion of project staff, benefit from their social contacts with the hearing children.

With respect to articulation problems, four of the six children tested showed improved speech at the end of the program. Two of the children exhibited essentially the same number of speech (articulation) problems at the end of the program as they did at the beginning. The probability of the improvement observed was found, by the Sign test, to be nonsignificant.

The area in which the children exhibited the greatest growth was in the area of language. The mean number of words and sentences produced and average number of words per sentence are presented in Table 1. Analysis of these data

Table 1

Average Pre- and Post-Program Performance
on Three Measures of Expressive Language

Measure	Average	
	Pre	Post
Words Produced	330.33	348.00
Sentences Produced	29.16	25.50
Number of Words/Sentence	19.73	20.45

indicated that the changes observed between pre- and post-test were not significant. The data suggest that the number of words per sentence increased which accounts for the decrease in the number of sentences.

Table 2 presents the average number of times each of seven parts of speech

Table 2

Average Pre- and Post-Program Performance
on Measures of Frequency of Use for Seven
Parts of Speech

Part of Speech	Average	
	Pre	Post
Noun	23.66	22.16
Pronoun	9.50	9.83
Verb	26.33	29.00
Adverb	6.83	4.83
Adjective	20.83	18.33
Preposition	5.16	5.33
Conjunction	7.66	10.50

were produced in the children's stories on both the pre- and post-test. No differences were found to be significant. The increase in the number of conjunctions used, when coupled with the decrease in the number of sentences produced, suggests that the complexity of the sentences produced by the children was increasing.

Third Party Evaluator's Comments:

The children who participated in this project did benefit from their participation. The brevity of the training program and the small number of children involved make it almost impossible to obtain significant differences between pre- and post-test measures. If the program were considered to be "maintenance therapy," the failure to observe a significant decline in speech and language skills could be considered to be significant. This type of project is worthy of continued refinement and support.

Project Number: 100

Parent Oriented Home Program for Preschool Hearing Impaired Children.

Group Served: Hearing Impaired

Project Location: Medford and surrounding area

Funding Allocated: $2,320.00

Number of Children Served: 13

Background and Rationale:

The Rogue Center for Hearing and Speech is the major Jackson County facility serving hearing impaired children. Of the children served by the Center, 75% are between two and four years of age. The home is the natural environment of both the preschool age child and his parents. It is in the home where much of the child's early learning takes place. It is, therefore, logical to develop a program to train parents to take advantage of the home environment in their attempts to facilitate the speech and language development of their child.

Objectives:

1. To assist parents to utilize the available home environment to stimulate their child's language development.
2. To increase the understanding of the problems, techniques, and media involved in stimulating the language development of their hearing impaired child.

Methodology:

The homes of 13 preschool age hearing impaired children were visited twice a week by a Certified Teacher of the Deaf. Two "Master Mothers" (mothers of school-age hearing impaired children) accompanied the home teacher once a month. Each home visit was approximately one hour in length.

During the home visitation, the teacher discussed with the mother problems which she might be having in working with her child. The teacher also demonstrated various techniques for building awareness of sound, responding to sound, producing sound, etc. In addition to demonstrating the various therapeutic techniques, the teacher also explained the rationale behind them and their expected outcome. The teacher also assisted the mothers with the refinement of their own teaching skills and techniques.

An important part of the program was periodic parent meetings. The meetings focused on discipline, the importance of books and story telling, developmental play and home crafts, and on speech and language development. In addition to providing parents with the opportunity to receive didactic instruction, these meetings provided a warm, supportive atmosphere within which parents could obtain suggestions for the solution of problems experienced by them.

Evaluation Plan:

The two major evaluative instruments used in the project were developed by project staff prior to the beginning of the project. The first was an instrument designed to evaluate the adequacy of the parent's interaction with the child during four teaching demonstrations. A five point (2,1,0,1,2) rating scale was used. Either end of the scale represented an undesirable behavior (e.g., speech volume was too loud as opposed to there being almost no speech). The rating scale assessed parental behaviors (e.g., speech volume; spontaneous oral output; parental use of gestures; parent making sure child is watching parent's face during speaking, etc.) deemed essential to a language development program. The second evaluative instrument was a true-false test designed to measure the parent's understanding of various concepts related to the education of their child.

The rating scale and knowledge test were administrered both prior to and after the summer home visitation program. In addition to these data, the teacher tape recorded the weekly sessions with the parent and her child.

Results:

In the estimate of project staff, the objectives of the project were met. Pre- and post-test scores were obtained for 10 parents on the rating scale. Eight of the parents ($p = .11 > .05$, Sign test) were rated as having improved in their ability to present structured "language" lessons to their child.

On the true-false test nine ($p - .04 < .05$, Sign test) of the ten parents exhibited improvement. This increase was, according to the Sign test, significant. The parents obtained an average score of 25.7 items (out of 31) correct on the pre-test and 27.5 on the post-test. The observed pre-post difference between means was significant ($t = 3.14$, df 9, $p = < .05$). Although the parents did quite well on the test initially, they did exhibit increased knowledge at the end of the project.

Third Party Evaluator's Comments:

The successful completion of this project represents a significant accomplishment. The distances covered by the itinerent home teacher stagger the imagination. The service rendered the children in the program, as well as their parents was, however, well worth the effort and time expended. The immediate objectives of the project appear to have been well met. The long-term benefits will become apparent when the children who participated in the project are enrolled in school.

Project Number: 103

Oregon's History: The Trainable Mentally Retarded Child and his Heritage.

Group Served: Trainable Mentally Retarded and Multiply Handicapped

Project Location: Salem

Funding Allocated: $7,749.80

Number of Children Served: 56

Background and Rationale:

Inspired by the recent trend in Oregon to recognize the trainable mentally retarded student in educational settings, this project attempted to acquaint a group of TMR children with selected topics of Oregon's history and geography. Both academic and travel programs were utilized. The proper conduct one expects of a citizen was emphasized as well, especially during the field trips. This included--understanding and respecting civic and state laws, conservation regulations, and traffic laws of the communities visited.

There was a secondary aim of the field trips. The students would be on trial in the face of social situations arising from daily living experiences outside the shelter of their school. It would be of great value to the state and local residents to personally be given the opportunity to assess the practical life training of the Shangri La School curriculum.

Objectives:

The project objectives, as stated, were as follows:

1. To provide a curriculum emphasizing the history, natural resources, industries, and beauty of Oregon to establish the opportunity for TMR's to practice good citizenship and create an understanding and appreciation of their heritage.

2. To provide the opportunity for each student to perform adequately in life experiences outside of the school atmosphere, as well as within, with the use of peer-teachers in every situation possible.

3. To provide the opportunity for state-wide communities to meet the TMR child in social situations hopefully to create a favorable and healthy image and interest in the TMR child.

4. To provide Oregon College of Education work-study students with a working and teaching knowledge of the TMR child within the school

structure and in various communities as they face practical daily life experiences. (Note: OCE work-study students were not available as originally planned; however, seven Neighborhood Youth Corps girls were able to participate as aides.)

Methodology:

This project involved an eight-week instructional program in which a curriculum was designed to acquaint the students with three aspects of Oregon's geography; historical considerations were included also. The activities centered around three units--The Tide Pool, The High Desert, and The Great River. The instructional activities were designed in such a way so as to be compatible with the "Life-Span Goals" of Shangri La School. Classroom instruction was provided prior and subsequent to each field trip. The experiences were varied and numerous; exemplary places visited and sights seen were: Oregon State Marine Science Center, wax museum, log museum, Oregon Museum of Science and Industry, lava flow areas, rock gardens, game farm, fish hatchery, dairy, fish cannery, nature walks, etc. Each child was involved in the curriculum at his own level of ability. Overnight trips were planned for advanced students. Field trips of shorter length were available to younger children.

It is interesting to note that more than 100 agencies, institutions, groups, businesses, and individuals cooperated to provide the activities of the academic and travel programs. Their services were available in terms of living and recreational accommodations, instructional materials, resource instructors, coordination of activities within a community and so forth.

Evaluation Plan:

The principal evaluation instrument was a pre- and post-test of factual information on each of the three units of study--Tide Pool, High Desert, and Great River. The curriculum consultant and teachers prepared a minimum of five questions for each topic studied in the three units. The questions varied in difficulty. Responses were rated on a Likert Scale of 1-5. The range of possible scores included: 0--no response; 1--any limited response (even wrong answer accepted); 2--limited correct answer or appropriate non-verbal response; 3--more than one correct limited answer or response; 4--accurate and complete answer or response; and 5--volunteer additional information as well as accurate and complete response (#4). Testing was done by project staff.

The content and quality of written reports of students, tape recordings, parental comments, student projects, staff evaluations, and "feed-back" from citizens participating provided additional subjective evaluative measures.

Results:

Tables 1-5 display the pre- and post-test scores on the three units.

Table 1

Kindergarten ("Kinders") Level

Unit	N	Average Rating Pre	Average Rating Post	D	t	p
Tide Pools	7	5.71	9.14	3.42	2.27	>.05
Great Rivers	5	7.80	15.40	7.60	3.41	<.05
High Deserts	6	4.83	10.50	5.67	6.17	<.05

Table 2

Primary Level

Unit	N	Average Rating Pre	Average Rating Post	D	t	p
Tide Pools	9	11.22	14.55	3.33	2.33	<.05
Great Rivers	7	12.14	19.86	7.72	4.92	<.01
High Deserts	9	12.00	16.33	4.33	2.74	<.05

Table 3

Intermediate Level

Unit	N	Average Rating Pre	 Post	D	t	p
Tide Pools	10	7.30	17.70	10.40	9.57	<.001
Great Rivers	8	8.38	18.00	9.62	4.15	<.01
High Deserts	8	8.88	15.13	6.25	5.06	<.01

Table 4

Teens Level--I

Unit	N	Average Rating Pre	 Post	D	t	p
Tide Pools	15	8.27	11.13	2.86	2.52	<.05
Great Rivers	7	17.43	19.86	2.43	1.59	>.05
High Deserts	13	16.85	18.15	1.30	1.51	>.05

Table 5

Teens Level--II

Unit	N	Average Rating Pre	 Post	D	t	p
Tide Pools	12	9.75	15.17	5.42	5.90	<.001
Great Rivers	11	12.27	16.73	4.46	4.48	<.01
High Deserts	13	11.08	22.08	11.00	8.62	<.001

Each table represents a different age level, e.g., kindergarten, primary, etc. These tables indicate that significant differences between pre- and post-program ratings were obtained on measurement.

Comments attesting to the success of the project were provided by numerous individuals--staff and Neighborhood Youth Corps girls, students, parents, and individuals from the community. Several of the statements contained indication of excessive emotional involvement which tends to discredit "objectivity." Many statements referred to specific observable behaviors. For example:

> "The trips really helped with public behavior. I could see the change as they learned to stay together both as a class and as a school when we toured. They also learned when it was appropriate to talk and to keep their hands to themselves at the right time."

> "For example, some students retained fairly detailed information about rivers and dams. However, one girl, I was told, when shown a picture of a dam replied, 'Dams stop water.' For this particular girl, learning that one fact was quite an accomplishment."

A copy of the curriculum guide was submitted as part of the final project report. Essentially the guide consisted of: (a) an outline of the topics comprising the three units of study; (b) some of the materials and techniques used; and, of course, (c) the pre- and post-test questions. The art work, craft projects, and student classwork submitted as part of the project report might also function as additional explanation of the curriculum guide.

Third Party Evaluator's Comments:

This project enjoyed a measurable amount of success. Performance scores on the post-tests indicate there were gains in the acquisition of factual knowledge. There were other benefits. "Enjoyment, appreciation, etc." were manifested in observable behaviors. While one would find it difficult to measure "degree of enjoyment," the behaviors comprising the more generic term "enjoyment" can be observed and noted. In several instances within the project report, these more specific behaviors were cited; and as such, do provide a subjective measure of project success.

The curriculum guide, in its present stage of development, does reflect considerable effort. The guide would be strengthened if it contained a discussion of the rationale used in selecting the particular information to be studied. Undoubtedly, a subsequent stage of development will consider presenting instructional techniques consistent with recent developments in the technology of teaching.

Project objectives numbers two and three have been fulfilled as they only required that "opportunities be provided." Objective number four was aimed at providing a "working and teaching knowledge of the TMR child..." There has been no attempt to ascertain acquisition of this "knowledge!" The evaluative comments provided by the NYC girls did not appear to be adequate in making such a determination. The wording of objective number one lends itself to a similar problem in determining fulfillment of the objective. While it is true that a curriculum is being developed, the guide's effectiveness "to establish the opportunity for TMR's...appreciation of their heritage..." remains open to question.

In spite of the problems arising from the wording of project objectives, a sufficient amount of adequate data has been provided to judge this project as having produced a "measurable amount of success."

Project Number: 105

A Program of Camping Experience for the Educable Mentally Retarded.

Group Served: Educable Mentally Retarded

Project Location: Bend

Funding Allocated: $2,928.00

Number of Children Served: 25

Background and Rationale:

Health, safety, physical education, and recreation are considered to be important curriculum areas in special education. A summer program was designed to provide educable mentally retarded students with meaningful experiences in these areas through camping activities.

Objectives:

1. To provide a week of camping experiences for primary, intermediate, junior, and senior high level educable mentally retarded students.
2. To help the students develop health, safety, physical, and recreational skills through organized camping activities.
3. To provide meaningful work experience for the two aides.

Methodology:

There were four one-week camping programs which served 25 students representing the primary, intermediate, and junior and senior high level. Four staff members, two teachers, and two aides participated in each of the camping retreats.

The first week of the project was spent in program preparation and camper aid orientation. The two aides were enrollees in senior high at the Bend Public School. One lived at a range for delinquent boys, and the other was a student in the special education program.

A one-week camping program was designed for each of the following educational level groups: (a) primary; (b) intermediate; (c) junior and senior high; and (d) primary and intermediate combined. A well-organized program of camping activities was geared to each group (see Table 1 for a partial listing of activities). Behavior modification techniques were used with three of the students who presented more severe behavioral problems. Four staff members--two teachers and two aides--participated in each of the camping retreats.

Table 1

Task Completion

Task	Group	
	Intermediate (N=8)	Junior & Senior (N=10)
Tie three of the following knots, i.e., slip knot, double half hitch, clove hitch, square knot, bolin	6*	7
Lay, start, maintain, and put out camp fire	6	10
Unroll sleeping bag, construct a suitable sleeping site, and roll up sleeping bag	8	10
With limited aid from counselor, set up tent for all kinds of weather	1	9
With aid from counselor, prepare simple meal for campers	8	10
Demonstrate that they can perform first aid, i.e., triangular bandaging, shock treatment, application of tourniquets	7	10
Row a boat 100 yards in a straight line	3	8
Demonstrate verbally and physically rules of water safety, i.e., swimming with buddies, using trousers to construct water wings, and two types of artificial resuscitation	8	10
Demonstrate that they can care for their own clothing for one week	8	10
Completely rig one fishing pole for bait fishing	4	10
Demonstrate the proper use and care of camp tools, i.e., ax, shovel, and saw	8	7

*Six of the eight students in the intermediate class completed the first task.

Evaluation Plan:

The following information was obtained on each of the four groups of campers:

1. Number and type of camping tasks completed.
2. Work assessment ratings for the camper aides using a five-point Likert scale.
3. Sociograms (pre and post).
4. Recording and charting the rates of targeted problem behavior(s) of some students.

Results:

The first objective was met as there were four camping programs which served each of the four educational level groups. On the basis of the information reported in Table 1, it appears that the second objective was also met. Finally, according to the detailed descriptive records in the written reports, the camp aides were provided with considerable work experience as they took an active part in assisting and supervising the students in camping activities.

The following information gathered deserves mention. First, a five-point Likert scale was used to periodically rate the work performance of the aides on a 16-item questionnaire. These ratings, which were systematically gathered, assisted the two senior staff members in providing the two aides with more meaningful and individualized work supervision. Secondly, pre- and post-sociograms were collected on each of the four groups of campers (see Table 2 as example). This is a useful technique for identifying leaders, isolates, and rejects. The pre-camp sociograms could certainly have been useful for identifying the social relationships among the different groups and thus facilitate the planning for group experiences; however, the extent to which the data was used for this purpose is not known. Finally, behavior modification techniques were used with three problem students. As a result of the well-described procedures and precise collection of data, it was shown that the pinpointed behavior problems decelerated markedly.

Third Party Evaluator's Comments:

This was a well-planned and conducted project in which considerable effort was taken to maximize the effectiveness of the program. A point well worth mentioning is the evening program that was held at the end of the project for all the students, their parents and relatives, and the staff. Seventy people attended this event in which slides and student reports were used to summarize the summer project.

Table 2

Pre- and Post-Sociograms: Intermediate Group

Ss	Items** 1		2		3		4		5		6	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
1	3*	0	0	5	0	2	4	3	2	0	5	3
2	13	11	9	6	14	6	8	6	11	9	6	15
3	11	6	0	3	6	5	3	5	4	2	3	0
4	0	2	2	6	2	3	5	7	0	4	0	0
5	2	9	0	3	3	8	3	13	8	5	9	3
6	11	4	10	0	3	0	0	0	9	3	6	0
7	11	4	10	0	3	0	0	0	9	3	6	0
8	0	0	7	2	1	4	7	2	0	0	0	0

*total score (3 and 2 points represent first and second choice, respectively--prior to the program, S_1 was most liked by one of the group members).

**1. Which two persons in this class do you personally like the most?

2. Which two persons do you personally like the least?

3. Which two persons in this class are most cooperative with the teacher and like to do what the teacher wants the class to do?

4. Which two persons in this class most often go against the teacher and what he would like the class to do?

5. Who would you most like to be if you couldn't be yourself but had to be somebody else in this class?

6. If there were something important you wanted to be sure was done right, what person in your class would you ask to do it?

Project Number: 107

A Program of Recreational and Leisure Time Activities for Educable Mentally Retarded Children

Group Served: Educable Mentally Retarded

Project Location: Pendleton

Funding Allocated: $2,394.50

Number of Children Served: 24

Background and Rationale:

Recreation and leisure time is considered to be an important phase of the life of a person. Since the retarded do not necessarily master such skills through incidental learning, an educational program of organized recreational and leisure time activities is felt to be important in order to facilitate the retardate's adaptation in the community.

Objectives:

1. Provide opportunity for educable mentally retarded students to participate in various recreational and leisure time activities.

2. Improve educable mentally retarded students' self-concept through participation in out-of-school activities.

3. Provide opportunity for each student to become actively involved in at least one of each of the following types of activities:

    a. year-round out-of-school activities
    b. summer out-of-school activities
    c. summer in-school activities
    d. hobby type activities

Methodology:

Prior to the beginning of the program, the activity experience coordinator surveyed activity programs available through various agencies and organizations in the community. As a result of this effort, the following directory was compiled:

Direct Participation Groups

American Legion Baseball
Babe Ruth
Boy Scouts of America

Support and Financial Aid Groups

Eagles Lodge
Elks Lodge
IOOF

Direct Participation Groups

- Campfire Girls
- 4-H Programs
- Girl Scouts
- Hunter's Safety Program
- Little League
- Pendleton Art Club
- Pendleton Parks Program
- Pendleton Red Cross Swimming
- Salvation Army Camp for the Handicapped
- Umatilla County Library's Reading Program
- School District Library's Summer Programs

Support and Financial Aid Groups

- Jaycees -- Jaycee-Ettes
- Knights of Columbus
- Knights of Pythias
- Lions Club
- Order of Eastern Star
- Oregon Trail Gem and Mineral Society
- Pendleton Council of Churches
- Pendleton Masonic Lodge
- Pendleton Ministerial Association
- Pendleton Shrine Club
- Red Cross
- Rotary Club
- Royal Neighbors of America
- Salvation Army
- Veterans of Foreign Wars
- Umatilla Indian Agency
- Kiwanis Club

The coordinator was also responsible for initiating new interest in community agencies for potential activity support.

The staff members met with the students and their families when possible and cooperatively planned an individualized activity program for each student using the directory. The coordinators were then responsible for implementing and supervising each individual program. The parents were also encouraged to participate.

Evaluation Plan:

The instrument used to obtain student self-concept pre- and post-test measures was Self-Concept as a Learner Scale (Wgetjen). In addition, record was kept of the four activity types in which the students participated (see Objective 3).

Results:

In determining how well the objectives of the project were met, one must rely mainly on the written report of the program because only a small amount of data was gathered. Nevertheless, when this information is considered along with the descriptive account of the students' participation (summarized in Tables 1 and 2), it appears reasonably safe to conclude that the main objective of the project was met, i.e., to provide an opportunity for educable mentally retarded students to participate in various recreational and leisure activities.

Table 1

Number of Children who Participated in N Activities Within Each Activity Type

Type of Activity	Number of Individual Activities Within each Type				
	1	2	3	4	Total
year round out-of-school	2*	7			9
summer out-of-school	3	9		8	20
summer in-school	11				11
hobbies	7				7

*Two of the 24 children participated in a single year round out-of-school activity.

Table 2

Number of Students who Participated in Each of Four Types of Activity

Activity Types	Number of Students
0	3
1	7
2	6
3	1
4	7*

*Seven of the 24 students were involved in at least one of each of the four types of activities, i.e., year round out-of-school, summer out-of-school, summer in-school, and hobbies.

The use of the Self-Concept as a Learner Scale with the mentally retarded is highly questionable. However, it was the sole criterion for evaluating how well the second objective was met. The results, which probably reflect meaningless data, indicate that the students' self-concept did not improve in any one of the four areas measured.

As for the final objective, it is presumed that each student was given ample opportunity to become involved in at least one of each of the four activity types. However, only seven of the 24 students actually did so.

Third Party Evaluator's Comments:

More attention should have been given to the organization, structure, and evaluation of the program. In addition, more appropriate instrument selection for the retarded should have been made. Nevertheless, it is felt that this project served as a 'start' for a recreational and leisure time program for the mentally retarded in the Pendleton community.

Project Number: 108

A Coordinated Program of Music and Speech Therapy for the Improvement of Speech and Coordination of EMR's in the Canby-Molalla Area

Group Served: Educable Mentally Retarded

Project Location: Canby

Funding Allocated: $4,930.00

Number of Children Served: 12

Background and Rationale:

This project represents an attempt to coordinate music activities for the improvement of speech and coordination of educable mentally retarded children. The teachers involved have devised a program of musical activities, songs, rhythm instruments, etc. so that the children may develop a finer musical response. This, in turn, should give rhythm and inflection to the student's speech. With the belief that children can more quickly be reached through rhythmic activities, new ways were to be sought to link musical response to speech patterns. These findings would be carried over in the school year and may be of help at other school districts with EMR programs.

Objectives:

The project objectives were stated as:

1. Improve musical response.
    a. Develop better rhythm.
    b. Improve coordination.
2. Improve speech patterns.
    a. Develop good rhythm and inflection patterns in speech.
    b. Encourage youngsters to be aware of overall speech patterns.

Methodology:

The parents of children in the local EMR classroom were polled as to interest in their anticipated cooperation with the proposed program. The children of interested and cooperative parents comprised the group from which final selection was made by the music teacher, the EMR teacher, and the speech therapist. The 12 children (CA 7-10 to 12-6; $\overline{X}$ = 10-1) chosen were noticeably lacking in ability to respond to music stimuli. In addition, their speech lacked necessary rhythm and intonation.

With the combination of the speech and music programs, improved musical responses and speech patterns were anticipated. Three staff members (EMR teacher, music specialist, and speech therapist) combined their skills to provide a program of activities in physical education (emphasis on Delacato and Kephart methods), music and speech.

The program was in session from June 9 through July 18. The class met daily for three hours in the morning. Facilities included the gym and one classroom. Parents were allowed to visit if they desired; however, parental participation was not required. No staff in-service training was planned.

Evaluation Plan:

As a result of a conference between the project staff and the third party evaluator, methods of evaluation were changed to include pre- and post-tests of: (1) motor coordination; (2) speech--voice; (3) speech--articulation; (4) McDonald's Deep Test of Articulation; (5) music--pitch discrimination; (6) music--chord memory; and (7) music--rhythmic ability. Daily logs were to be maintained for each student.

Results:

Table 1 displays the pre- and post-test scores for each student on the

Table 1

Pre- and Post-Test Performance

Measure	N	Average Score		D	p*
		Pre	Post		
Motor Coordination	9	35.44	47.11	11.67	<.05
Voice	9	9.00	7.89	1.11	>.05
Articulation	9	25.22	18.00	7.22	<.05
McDonald's Deep Test of Articulation	9	75.67	86.22	10.56	<.01
Pitch Discrimination	9	6.44	6.00	.44	>.05
Chord Memory	9	8.33	7.56	.77	>.05
Rhythmic Ability	9	45.33	48.67	3.34	>.05

* Sign Test

seven evaluative measures. The sign test for matched pairs was used to ascertain whether the differences between group pre- and post-test scores were significant. At the .05 level, significance was obtained for three tests--Motor Coordination, Speech-articulation, and McDonald's Deep Test of Articulation.

The project staff submitted the following comments subsequent to the project. "While the tests have been able to measure with a fair degree of accuracy the extent to which we have accomplished the stated goals, we feel there have been other successes as well. These include such things as Robert's learning to tie his shoes and to do somersaults; Nita's learning to skip and to do somersaults; Christine's display of leadership ability; and John's learning to skip. Several of the children have learned to put the small pieces of jigsaw puzzles together and many show other evidences of eye-hand coordination. Also, attention span and listening ability have increased. From this standpoint we all agree that the program has had several additional benefits for the children."

Third Party Evaluator's Comments:

By using the sign test, significance was obtained for differences between three sets of pre- and post-test scores. There are at least two reasons why significance may not have been obtained for the other four tests. When N (number of subjects) is small, statistical significance is difficult to obtain. Also, the tests perhaps were not sufficiently sensitive to measure changes in performance. It should be noted that of the three music tests administered, only the Rhythmic Ability Test had a direct bearing on the project objectives stated. The staff's subjective comments, regarding other benefits received by the children, might be considered to provide additional, yet minimal, support. "Shoe lace tying, somersaults, learning to skip and jigsaw puzzle performance" apparently were not identified (prior to the project) as possible outcomes.

In view of the test result differences which were significant and the comments submitted by the staff, it appears reasonable to conclude the project did produce some indications of success.

Project Number: 109

A Regional Summer Speech and Special Education Project for the Trainable Mentally Retarded

Group Served: Trainable Mentally Retarded

Project Location: North Bend

Funding Allocated: $3,372.00

Number of Children Served: 17

Background and Rationale:

Prior to July 1, 1969 educational provisions were not available to trainable mentally retarded children through the public school programs. The Coos County Association for Retarded Children provides a workshop program for older trainable youngsters. The program does not focus, however, on the development of either academic or speech skills. Programs for young trainable children are virtually non-existent.

Objectives:

1. To provide clinical speech therapy designed to improve the use of speech and language by TMR youngsters.

2. To provide a special education program suited to the needs of the TMR.

3. To provide a physical education program designed to improve the physical coordination of a group of TMR youngsters.

Methodology:

Two groups of trainable mentally retarded youngsters participated in this project. Eight primary level (CA = 4-8 to 7-5 years; $\bar{X}$ CA = 6-3) and nine adult (CA = 16-11 to 36-6; $\bar{X}$ CA = 22-6) trainable level retardates attended half-day training sessions five days per week for eight weeks. Both groups were taught by a certified teacher of the educable retarded.

The program for young children met during the morning. The children were provided with "physical education" (e.g., bouncing and throwing a ball; crawling; running; circle games; etc.) activities, academic training (e.g., picture identification; coloring; visual discrimination tasks; listening to stories; etc.), and socialization opportunities (e.g., manners at the table; on the playground; etc.). In addition to their in-class activities, each child was provided speech therapy by a certified speech therapist.

The afternoon (older TMR) group participated in "school-like" activities as part of their day at their workshop. "Physical education" activities included running games, circle games, and bouncing, throwing, and catching a ball. They were taught simple reading and arithmetic skills, developed their language ability by telling stories, etc., saw several films, and went on a number of field trips. In the area of job training, the retardates sorted and counted cartons and garden stakes, bagged bark mulch, and sorted, stacked, tied and stacked bundles of newspapers. These children were also provided speech therapy.

Evaluation Plan:

The children were assessed, using the Progress Assessment Chart, both prior to and subsequent to the program. In addition, they were given a speech evaluation.

Results:

The data collected were not amenable to statistical analyses. Therefore, subjective judgements regarding the effect of the program were used to determine the outcome of the program. In general, the project seemed to have a positive influence on both groups of children. Their attention spans seemed to improve; they were more sociable and mannerly; they seemed to be better coordinated. Although the degree of improvement in speech skills was, overall, minimal, it was felt that most of the children benefited (for them) significantly.

Third Party Evaluator's Comments:

The provision of a speech therapy, special education, and physical education program to TMR youngsters accomplished the project's objectives. In view of the opinion that "something may be better than nothing," the project must be considered a success. There are no hard data to support this conclusion, however. The project could have been improved by (1) focusing on one of the age groups served, and (2) better record keeping.

Project Number: 110

A Regional Summer Speech and Language Project for Pre-school and First-Grade Children

Group Served: Speech Handicapped

Project Location: Coos Bay and surrounding area

Funding Allocated: $6,632.00

Number of Children Served: 63

Background and Rationale:

The special education program in Coos County does not provide clinical speech therapy for pre-school age and first-grade children. Unless clinical speech therapy is provided to children within this age group who have speech problems, they will enter school with an existing disability. Improvement in speech and language is considered to be desirable because such improvement will allow the children to participate more fully in the educational activities of the early grades.

Objectives:

The objective of this project was to effect improvement in the speech and language of pre-school and first-grade children from Coos County.

Methodology:

With the assistance of the Coos County Health Department, I.E.D. staff determined that approximately 125 primary age children were in need of speech therapy. Of these, 101 children were referred for therapy and 63 accepted for therapy.

Therapy was provided at four locations in Coos County. Children were seen by the clinician from one to five times per week for 30 minute therapy sessions. These sessions were conducted for a period of eight weeks. Each child was provided with an individualized treatment program consistent with accepted speech therapy practices.

Evaluation:

Each therapist administered an individual diagnostic test to each of the children. At the conclusion of treatment the same test was readministered to the children.

Results:

The 63 children served had, on the average, 27.28 defective sounds at the beginning of therapy and 16.92 at the conclusion of therapy. The difference between these means is significant (t = 7.39, p.= <.01, df - 58). The Sign test also indicated that the number of children who exhibited improvement between pre- and post-treatment tests was significant (p. = <.01).

Table 1 provides data regarding the kind of speech problems observed

Table 1

Frequency of Speech Problem and Degree of Improvement Obtained

	Children Served		Therapy Outcome					
			Corrected		Improved		No Change	
Defect	N	%	N	%	N	%	N	%
Articulation	37	59	6	16	28	76	3	8
Delayed Speech	13	20			9	69	4	31
Lisp	7	11	2	29	5	71		
Stuttering	3	5					3	100
Hearing	2	3					2	100
MR speech	1	2					1	100
Totals	63	100	8	13	42	67	13	20

and the degree of improvement obtained. Thirteen per cent of the children had their speech defect corrected; 67 per cent had theirs lessened. Children with fluency problems or speech problems due to delayed speech, mental retardation, and hearing impairment account for 10 of the 13 children who did not show improvement.

Third Party Evaluator's Comments:

This project represents an effective and efficient use of both time and money. The provision of clinical speech therapy to primary grade youngsters not only corrects speech problems but also ensures the child of one less problem with which he must cope during the important primary grades.

Project Number: 111

Learning Disabilities: Identification and Remediation at Kindergarten Level.

Group Served: Speech and other Health Impaired

Project Location: Lake Oswego

Funding Allocated: $11,554.00

Number of Children Served: 30

Background and Rationale:

There are some youngsters who are identified as "children with learning disabilities" because they exhibit learning problems which are not due primarily to: visual, hearing, or motor handicaps; mental retardation; emotional disturbances or environmental disadvantaged. Youngsters such as these who do not ordinarily learn to read are often labeled "dyslexic," and may be called "high risk." Katrina de Hirsch, in her book, Predicting Reading Failure, discusses a battery of tests which were found to be reliable in identifying these "high risk" children.

This project, after identifying a group of "high risk" children, proposed to implement a remedial program to improve performance of children having difficulties in: (a) seeing sequential relationships in behavioral, visual or auditory activities; (b) seeing and reproducing spatial configurations or shapes and designs; (c) coordination; (d) attending to assigned tasks; (e) understanding time and space and their bodies in it; and (f) language.

Project Objectives:

Originally, there were two objectives of the project: (1) to identify "high risk" children having the six difficulties noted in the paragraph above; and (2) to develop remedial techniques to improve their performance in these areas. In a subsequent discussion between the project director, the project staff, and the member of third-party evaluation team, the project objectives were somewhat modified. "High risk" children were to be identified (using de Hirsch's predictive tests) but the remedial program was directed toward improving performance on the de Hirsch battery of tests. Whether such improved performance would subsequently prevent reading failure is to be regarded as an empirical question and lies beyond the scope of this summer project. The question was of interest to the staff, however.

Methodology:

Seventy-three children were referred by their kindergarten teachers because they had one or more of the following characteristics: difficulty in seeing sequential relationships in behavioral, visual or auditory activities; lack a good body image; trouble with direction; trouble seeing and reproducing spatial configurations of shapes and designs; poor language development; poor coordination; and often hyper-active and distractable. Each child was administered the following tests found useful by de Hirsch in predicting reading failure: pencil use; Bender-Visuo-Motor Gestault Test (abbreviated Bender); Wepman Auditory Discrimination Test; number of words used in a story; categories; Horst Reversals Test; Gates Word Matching Test; Word Recognition I; Word Recognition II; and Word Reproduction. To also assist in selection of students, the staff planned to use the tests of Dr. John Butler (U.O. Medical School) to identify children with a lag _in_ their neurological development. Thirty children (CA 6-9 to 8-5; $\overline{X}$ = 7-2) were selected for the project.

The six-week remedial program met for two and one-half hours daily. The groups of children participated in 20-minute, highly structured instructional sections. The children moved from one activity to another in an orderly, regularly scheduled fashion. The remedial program consisted of a variety of instructional experiences--speech stimulation, concept development, sequential movement of body parts, etc. It should be noted again that the activities were highly structured and well integrated to insure a high rate of responding with much repetition in varied, interesting presentations.

Evaluation Plan:

Evaluation of project success was based upon differences between pre- and post-test scores on the ten tests found useful in identifying "high risk" children. (Test #1, "Pencil Use," was dropped as a measure of progress because all 30 children passed it when it was administered as a pre-test.) Teacher evaluations on each child were expected to provide additional relevant information not provided by the pre- and post-tests.

Subsequent measures were anticipated, although they were not regarded as part of the summer project itself. In addition to the 30 students participating in this project, another group of "control" children was identified. Both the experimental and control students shall be examined with the de Hirsch tests in May, 1970. The Gilmore Oral Reading tests shall be administered also.

Results:

Table 1 provides the pre- and post-test scores for nine of the ten de Hirsch test battery. "Pencil Use" (Test #1) was not used as a measure of progress because all children passed it on the pre-test administration. The nature of scoring varies between tests. Progress is indicated by increase in post-test scores for only two tests, "Number of Words" and "Word Reproduction." The other tests measure errors which desirably would

Table 1

Pre- and Post-Test Scores on "High Risk" Test Battery

Test	Average Score				
	Pre	Post	D	N	p*
Abbreviated Bender	4.77	4.11	.20	27	>.05
Auditory Discrimination	5.00	2.81	1.96	27	<.05
Number of Words Used in Story	136.29	183.55	60.63	24	<.05
Categories	1.03	.37	.67	27	<.01
Horst Reversals Test	7.43	3.70	3.78	27	<.05
Word Recognition I	.80	.11	.67	27	<.05
Word Recognition II	.97	.22	.63	27	<.01
Word Reproduction	1.80	2.70	.63	27	>.05
Word Matching	5.73	3.34	2.50	26	<.05

*Sign test

show a decrease on the post-test. The Sign test was used to indicate differences (if any) between the pre- and post-tests. Significance at the .05 level was obtained for all tests except the Abbreviated Bender (Test #1) and the Word Reproduction (Test #8).

On the student evaluations, teachers made such comments as:

"Better listening habits."
"Growth in number of directions that can be followed."
"Growth in understanding verbal instructions."

Unsolicited parental comments are exemplified by the following:

"Alex is trying a lot more things on his own. He has much more confidence in himself since summer school."

> "I sent my son to play with a neighbor child. He hadn't been there very long before the other child's mother phoned to ask what we had been doing with Alex; he was so much more grown up."

Third Party Evaluator's Comments:

The results of a remedial program, such as that employed in this project, tend to be apparent only after several weeks or months. The duration of the project was six weeks and yet significant differences (by Sign test) were obtained on seven of the nine tests! Although the differences tend to be relatively small, they should be regarded as "impressive." The subjective comments of teachers and parents do provide additional support in concluding this project was successful.

Worthy of note also was the staff's willingness to reexamine the objective, rationale, and evaluative measures prior to the commencement of the project. As a result, additional questions will be answered, especially with subsequent evaluation (de Hirsch battery and Gilmore Oral Reading) of both the experimental and control groups at the end of first and second grades. If, in subsequent testing (first and second grades), the experimental groups score significantly higher on the de Hirsch test battery and can also read better, then the following very important conclusion would seem reasonable. Teaching to the "areas of difficulty" not only improves performance on the de Hirsch tests but also prevents reading failure in "high risk" children with learning disorders. Although the remedial program could then be judged "effective," no statements could be made concerning specific elements or components of the remedial program being more effective than others.

Although the present project was a success, in itself, the anticipated results of subsequent activities hold even greater promise of making a highly significant contribution to the instruction of children with learning disorders.

Project Number: 112

Parkrose Summer Urban Environmental Skills Project for Seriously Emotionally Disturbed Children.

Group Served: Seriously Emotionally Disturbed

Project Location: Parkrose School District, Portland

Funding Allocated: $3,875.00

Number of Children Served: 14

Background and Rationale:

This six-week summer project was designed to provide non-academic experience to children who had been excluded from regular school classes due to severe emotional and behavioral disorders. Special emphasis was placed upon the development of physical, recreational, and social skills in order to increase the children's leisure time independence and ability to make more effective use of resources unavailable to them because of their handicapping condition. Most of the children had been involved in a special academic program during the school year.

Objectives:

As specified by project staff, the general goals of this project were as follows:

1. To develop socialization skills in non-academic situations.
2. To provide a "bridge" between the home and community during the summer months.
3. To prevent regression in social skills gained during the school year.
4. To serve as models to the parents, showing methods of handling inappropriate behavior in social situations.

Methodology:

All children (CA 8-9 to 15-0; $\overline{X}$ 11-8) participated in a regular program of classroom activities; arts and crafts keyed to outdoor activities, field trips, and recreation activities, including a three-day camping trip. The majority of the children were enrolled in "normal" summer school classroom activities taught by regular teachers. The four children who were not considered ready for the regular summer school activities were given specially structured classroom activities similar to those experienced during their school-year program. Specific skill training was to emphasize handling money, use of public transportation, use of library, shopping in stores, use of local recreation facilities, and participation in a family activity in a public place. It became necessary to drop the use of public transportation from the training program due to scheduling difficulties.

Evaluation Plan:

Pre- and post-test measures were taken on the Oregon Motor Fitness Test for Boys, the Deveraux Child Behavior Rating Scale, and the Jastak Wide Range Achievement Test.

Results:

Gains in scores on the Oregon Motor Fitness Test for Boys were evidenced for all but one student. The difference between pre- and post-test scores for the group as a whole was significant at the .05 level of confidence (using the Sign test). According to the norms, the group, as a group, were rated as having "fair" scores. The comparison of differences between pre- and post-test scores on the Deveraux Child Behavior Rating Scale are shown in Table 1. These data reflect ratings obtained by a project teacher, the parents of the children, and a professional psychological consultant; a positive value indicating gain (or improvement) and a negative value indicating loss (or regression) over the duration of the project, as judged by the raters. As can be seen from the data distribution, both the parents and the teachers reported gains for most children. The converse was true for the professional consultant. Also, the magnitude of change reported by the parents and teachers is much larger than that reported by the psychologist. Computation of the significance of pre-post test differences by means of the Sign test indicated that the gains reported by the teachers only were significant at the .05 level of confidence.

Table 2 shows the comparison of pre-post test differences on the Jastac Wide Range Achievement Test--reading, spelling, and arithmetic subtests. Computation of significance of differences between pre-post scores by means of the Sign test indicated that the number of children showing improvement was not significant. The magnitude of change for individual children was, consistently, very limited. In addition, there was no consistency in the direction of change across children.

Third Party Evaluator's Comments:

This evaluator is of the opinion that very little can be concluded regarding the effectiveness of this project on the basis of the evaluation data provided. With the possible exception of the Motor Fitness Test, the instruments were judged to be inappropriate to this particular application. In the case of the Wide Range Achievement Test, which is at best a screening instrument, the measures apparently lacked the required sensitivity to the degree of

Table 1

Improvement or Regression of Behavior on Factors on Which The Scores Exceeded one Standard Deviation above the 'Normal' Mean of the Devereaux Child Behavior Rating Scale

Child's Number	Parent's Sign Total	Teacher's Sign Total	Professional Observer's Sign Total
1	+6	+4	--
2	--	+3	-4
3	+7	+6	-3
4	+1	+4	+2
5	+6	+4	+1
6	-8	+9	-1
7	+7	+4	--
8	-2	+4	+3
9	+8	0	--
10	+5	--	+1
11	+3	+6	--
12	+4	+2	-1
13	+7	+9	-3
14	--	*	+2
15	-2	+6	0
Totals	+42	+61	-3
P	.058	0	1.000
By Sign test	>.05	<.05	>.05

*Teacher did not rate child's behavior 'abnormal' on any factor

Table 2

Pre- and Post-Test Performance on
The Wide Range Achievement Test

Academic Skill	Average Grade Placement Pre	Average Grade Placement Post	D	p*
Reading	3.25	3.35	.10	>.05
Spelling	2.66	2.66	.00	>.05
Arithmetic	2.77	2.88	.11	>.05

performance change that might be expected in a short-term summer program. In the case of the Devereux scale, the items apparently lacked sufficient objectivity to preclude influence upon the ratings by such extraneous factors as attitude, experience, or professional training.

It is recommended that the use of such instruments be avoided in future projects of this type, and that considerable thought and attention be directed toward the selection of measurement instruments having sufficient sensitivity and objectivity to meet the particular needs of the project.

Project Number: 113

An Intensive Summer Speech and Hearing Program Giving Needed Services to Selected Children Including Educable Mentally Retarded.

Group Served: Speech Impaired

Project Location: Scapoose

Funding Allocated: $3,495.00

Number of Children Served: 19

Background and Rationale:

A speech survey conducted in 1968 indicated that 69 children residing in the area served by Scapoose School District 1J evidenced speech problems ranging from mild to severe. The purpose of this project was to conduct complete speech evaluations of the children previously identified as having moderate or severe speech differences and to select from these a group of children to be given individualized speech therapy services. Speech therapy programs had not previously been available to these children.

Objectives:

1. To evaluate and specify specific speech therapy targets for each participant in the program.
2. To develop individualized plans of speech therapy activities for each participant.
3. To modify, insofar as possible, personality and/or behavior problems as they may relate to the total speech problem.
4. To provide specific counseling to parents with the objective of improving the child's speech environment.

A further objective of this project was to provide a basis upon which continuing speech therapy service could be included as part of the school district's existing Special Education program.

Methodology:

Nineteen children (CA 5-8 to 19-6; $\overline{X}$ 10-2) identified as having moderately severe or severe speech deficiencies were given a regular program of speech therapy. Thirty minute sessions four times weekly were conducted for a period of eight weeks. Individualized programs were developed in accordance with each child's needs. Where possible, parents were instructed in the use of specific therapeutic activities with their children in order to insure a continuation of program benefits.

Evaluation Plan:

Each child was given a complete diagnostic evaluation including: (a) an audiometric air and bone conduction examination; (2) an oral examination of the speech mechanisms, including a voice examination if indicated; (c) a general case history; and (d) an individual articulation inventory. The articulation inventory constituted a pre-test measure, and all children were subsequently post-tested with the same instrument (Templin-Darley Screening and Diagnostic Test of Articulation) at the termination of the program. In addition, daily records of each child's progress relative to his specific speech therapy activities was plotted on a line graph. Data were plotted as a function of "correct" responses emitted for a total of ten daily trials on each of several speech defects identified for each child. Finally, a summary of progress was prepared for each child, including reconsideration relative to continuing needs.

Results:

The children obtained a pre-test score of 25.6 items correct and a post-test score of 42.4 items correct on the Articulation test. At the beginning of the program, they had 8.78 defective speech sounds and an average of three defective sounds at the end of the program. For the group as a whole, a t test for correlated means yielded statistical evidence of differences between group means significant at less than the .05 level of confidence on both measures. Further, the daily chart of the children's progress in speech therapy showed steady increases in the proportion of "correct" dimensions for each child relevant to his particular therapeutic objectives. In a number of cases, children attained asymptotic levels (i.e., perfect performance) after only a few therapy sessions in one or more areas of their defective speech. Since the specific speech problems and therapy goals differed for each child, it would be meaningless to compute an average rate of progress for the group as a whole. Judging from the evidence presented, it appears reasonable to conclude that the project was successful in meeting its specified objectives to the extent they are reflected in the above measures.

Third Party Evaluator's Comments:

This project appears to have been particularly well designed and carried out. While less than half the expected number of children were served (and the basis for the reduced number was not stated), all participants showed acceptable progress. More importantly, the data obtained was: (a) directly relevant to the project objectives; (b) precise; (c) appropriate to the sample; and, apparently, (d) did not require undue investments of staff time. While conclusive evidence of the project's effectiveness in a generalized sense is not possible since neither a control group nor an acceptable baseline for using each subject as his own control was available, this evaluator is of the opinion that this project serves as a model for an exemplary evaluation strategy for projects of this type.

Project Number: 117

Intensive Training in Shop and Home Economics for Junior High EMR Pupils in the Care and Use of Equipment.

Group Served: Educable Mentally Retarded

Project Location: Milwaukie

Funding Allocated: $1,864.00

Number of Children Served: 16

Background and Rationale:

This four-week summer project was designed to provide educable mentally retarded junior high school students with home economics and shop experiences which would facilitate their further inclusion in regular class situations in these subject areas. It was assumed that such an intensive program of training might help to overcome the reluctance of regular classroom teachers of home economics and shop to include EMR students in their classes. This would be accomplished by reducing the EMR students' deficits which are most problematic to regular classroom teachers, i.e., lack of prior knowledge of subject matter area, lack of basic skills, lack of relevant prior experience, and inability to apply what is supposedly learned.

Objectives:

1. To provide instruction in basic skills.
2. To impart basic subject knowledge.
3. To assist in the application of knowledge and skills.
4. To help each student to achieve at his level.
5. To provide opportunities for experiences.
6. To provide opportunities for success.

Methodology:

The project was divided into two separate curricula; a home economics program for girls and a shop and crafts program for boys. Activities in the home economics program included experience and instruction in functions related to sewing, cooking, and personal care. The shop program included activities related to woodworking, fishing skills, leather craft, and a decoupage project employing application of all learned skills.

Evaluation Plan:

Pre- and post-test on equipment identification and function descriptions were to be administered to all student participants in the program. The evaluation was to include both oral and written items which were rated on a five-part scale reflecting the range from no assessable knowledge to full knowledge of identity and functions of equipment. Additional information of an evaluative form were provided in teacher's comments, and in letter grades awarded for each project completed. A parent questionnaire was to be utilized to assess the generalization of skills acquired in training to the home.

Results:

The difference between pre- ($\bar{X}$ 80.10) and post-test ($\bar{X}$ 138.90) total scores obtained by the ten male students on the shop tool identification and function examination was statistically significant ($t = 12.14$, p. $<.01$, $df = 9$). All students so evaluated demonstrated appreciable gains in terms of the number of items correctly identified and described in terms of function. The comparison of pre- ($\bar{X} = 34.50$) and post-test ($\bar{X} = 78.50$) scores obtained by the six girls on the home economics food preparation equipment identification and function evaluation indicated that all students demonstrated gains as measured by the test items. The difference between group means in this case is significant at the .05 level of confidence ($t = 9.63$, p. $<.05$, df 5). The teacher comments provided are essentially diagnostic in nature, and therefore do not lend themselves to evaluation of the student progress. Data reflecting parental responses to the home application questionnaire were not provided the evaluator.

Third Party Evaluator's Comments:

It appears reasonable to conclude from the data provided that this project was successful in meeting one of its specified objectives, i.e., to impart basic subject knowledge. One might reason that the objective of helping the student to achieve at his level was also met, although the term "achieve" and "level" are essentially undefined in the available material. The degree to which the remaining objectives were met must remain unknown, since the objectives were not operationally stated and did not lend themselves to empirical analysis.

Project Number: 118

Work Experience Farm Project for Educable Mentally Retarded High School Students.

Group Served: Educable Mentally Retarded

Project Location: Gresham

Funding Allocated: $3,448.00

Number of Children Served: 12

Background and Rationale:

This 11-week project was designed to provide meaningful and instructive work experiences for educable mentally retarded high school students who were unable to find regular employment.

Objectives:

The objectives of the project were principally concerned with increasing the employability of the EMR participant. The 17 specific project objectives as stated in the application are listed below.

At the completion of the Summer Farm Project, the student:

1. will be able to attain a grade score of C or better on the Science pre-test--post-test sheet.
2. will be sufficiently prompt to earn a grade of C or better on the Student Rating sheet.
3. will begin and end the work day on the prescribed schedule.
4. will report accurately clock time when hands are set in eight different positions.
5. will clean and put away his tools when he finishes using them.
6. will use tools in the manner prescribed by the instructor.
7. will plan and carry out a given work assignment.
8. will solve 15 change-making problems correctly.
9. will serve a customer without error in making change and without error in weighing or counting.

10. will solve five profit and loss problems correctly.

11. will weed a row without damage to crops and yet removing all weeds.

12. will identify by name all crops grown on project.

13. will select only and all ready-to-harvest crops when picking.

14. will wear clothing appropriate to the occasion scheduled by the teacher.

15. will record the date of planting and then measure the growth of selected plants on Wednesday of each week.

16. will keep a mileage log of the distance traveled from pick-up point to farm project.

17. will keep record on sales and total daily.

Methodology:

This project used as its work-training environment a small acreage farm project. The students carried out the function of planning, plotting, planting, cultivating, harvesting, and marketing the several crops, with appropriate guidance and instruction by the project staff. Students were apparently paid small amounts weekly and received a share of the total earnings from sales of the crops based upon the number of hours invested in the project. Anticipated functions were distributed and rotated among the students, and unexpected functions (e.g., equipment repair) were utilized as learning experiences where possible. Where appropriate and necessary, counseling was given the students relative to matters of dress, habit, and attitude.

Evaluation Plan:

Specific evaluative criteria were established for each of the 17 project objectives listed above. These included a 25 item science test, teacher rating, and a number of specific, discrete criterion tests (e.g., a time-telling test where the student is to state the correct time indicated by a clock face for each of eight different positions of the clock hands). Unfortunately, space restriction does not permit reproducing all the criterion variables. It should be stated, however, that each constituted a precise and adequate measure directly related to the respective objectives. In addition, each student was rated on seven dimensions of behavior related to appearance, work habits, and attitudes, using a five point Likert-type rating system wherein a value of five constituted the optimal rating.

Results:

Table 1 summarizes the results of comparisons of pre-post test data on the

Table 1

Summary of Pre-Post Test Comparisons of
Scores Obtained on Farm Project Criteria

Test	Significant?
Science	Yes
Punctuality	Yes
Schedule	Yes
Telling Time	No
Tools	Yes
Equipment	No
Completing Assignment	Yes
Money	Yes
Weeding	Yes
Profit and Loss Problems	No
Crop Identification	Yes
Harvest	Yes
Clothing	Yes
Measuring Plant	Yes
Growth	Yes

variables relating to the 17 project objectives. Statistical analyses are based upon the t test for correlated means or the Sign test, as the form of data requires. Pre-post project differences were significant at the .05 level of confidence for 14 of the 17 variables. Table 2 summarizes a comparison of pre-post project ratings on the student rating sheet. Using the

Table 2

Pre- and Post-Test Scores Obtained on
Personal Characteristics Rating Scale

Item	Average Score				
	Pre	Post	D	t	p
Manners	2.80	3.60	.80	3.18	<.05
Work Performed	1.90	3.60	1.70	5.06	<.05
Quality of Work	2.20	3.70	1.50	4.69	<.05
Care of Tools	2.30	4.10	1.80	5.74	<.05
Promptness	2.60	4.50	1.90	4.78	<.05
Appearance	2.70	4.00	1.30	3.94	<.05
Work Attitudes	2.30	4.20	1.90	4.71	<.05

t-test for correlated means, pre-post test differences significant at the .05 level of confidence were indicated for all seven variables. It appears reasonable to conclude from this evidence, insofar as it is accurate in reflecting student performance, that the project can be considered generally successful in meeting its specified objectives.

Third Party Evaluator's Comments:

This evaluator is of the opinion that this project serves as an exemplary model with respect to the specification and assessment of project objectives. Objectives were clearly and precisely stated in operational terms, and specific evaluative criteria and methods were designated for each objective. Furthermore, the objectives appeared, without exception, to be clearly appropriate and related to the project purpose. Such foresight in planning and managing a project allows considerable confidence in the assessment of effects of the efforts of the project staff. Aside from this, the project presented several unique and interesting characteristics of potential value in the preparation of EMR adolescents for economic and social adaptation in the community. First, the extending of training from the school year through the summer months likely reduces the amount of "regression" that might be expected over the usual vacation period. Secondly, it provides the children with productive, meaningful vocational experiences that would likely not be available in the form of regular employment during the summer months, rather than to allow the expectation of "non-work" to develop. Finally, the project provides a type and degree of direct involvement in all phases of a realistic economic process which would most certainly not be available in the typical work placement, either as part of a typical school-work program or in regular employment.

CONCLUDING COMMENTS

Impact

Perusal of the preceding section can only leave one with the impression that Title VI of the Elementary and Secondary Education Act has had a significant impact on the services provided handicapped children and youth in Oregon. More children in Oregon received needed educational services during the summer of 1969 than during either of the two previous funding periods. The services provided these youngsters appeared to be both high in quality and low in cost. In almost all projects the children manifested desirable growth in knowledge, attitudes, or skills.

Two continuing trends have, undoubtedly, contributed to the success of a number of the projects previously summarized. The first trend involves the use of "aides" and the second trend involves the use, by school personnel, of precision teaching (or behavior modification)techniques.

The increasing use of aides in the educational process is, in the estimate of the third party evaluators, a desirable trend. Aides make a substantial contribution to the teaching-learning process by freeing the teacher to plan and implement sound educational activities, by providing stimulation to the children in the class, and by reducing the teacher-pupil ratio. This increased attention to individual children and their educational needs cannot help but result in improved educational services. The several projects using aides consistently reported their satisfaction with this innovation.

The trend toward increased implementation of precision teaching strategies is also seen as worthy of support. Effective implementation of this educational system requires that desired educational outcomes for individual children be specified in measurable, behavioral terms. This has the effect of increasing the effectiveness of the educational program and the ease with which it can be evaluated. The evaluators anticipate that future reports will find that increased emphasis will be given to this strategy.

Summer Title VI and Evaluation

Based on their impressions of these projects, the third party evaluators feel confident in concluding that the Title VI funds expended in Oregon during the summer of 1969 did have a positive, significant impact. This conclusion is based more on subjective evidence than on hard data, however. Although several projects proved to be notable exceptions, the third party evaluators felt, at times, varied degrees of frustration over the evaluation of many of the projects reported herein.

Frequently, the evaluation planned did not relate too directly to the objectives of the project or the goals were inadequately specified. Six to eight weeks is insufficient to produce changes of great magnitude in many skills. Many of the measurement instruments were insensitive to the changes which occurred. All of these factors make a "hard" data evaluation very difficult. The fact that control or contrast groups were not used (one project did use a control group) precludes the firm establishment of a relationship between the changed behavior and the program provided in all but those projects using precision teaching strategies.

This is not to say, however, that summer Title VI projects should not be evaluated. The process of defining the behaviors to be measured at the end of a project requires project staff to be more precise in specifying what it is they hope to accomplish. Through the evaluation process sensitivity to the needs of individual children should be increased.

The third party evaluators feel that implementation of several modifications in the Summer Title VI program could result in more adequate evaluation and increased project effectiveness. These modifications are listed below as recommendations for future summer programs. It is recommended that:

1. Applicants and/or potential applicants for summer Title VI ESEA grants be required to attend an "Evaluation Workshop" prior to either submission of the grant application or funding. Such a workshop was held in the past; this practice should be continued. The workshop ought to include, at a minimum, instruction related to the specification of project objectives and in methods of evaluating the accomplishment of the objectives (data gathering).

2. Applicants be encouraged to specify only a few objectives for their project. The specification of ten major objectives for a six-week project is of questionable wisdom. Two major objectives with, perhaps, several precise sub-objectives, would seem to be most efficacious.

3. Applicants be required to specify the tool to be used to evaluate the accomplishment of the project's objectives. This should ensure that evaluation procedures will be tied to project objectives. Although standardized tests have the advantage of known reliability and validity, teacher made tests and evaluative tools should be used.

4. Evaluation efforts be kept as simple as possible. In addition, it should be stressed to the third party evaluators that Summer Title VI projects are service, not research projects.

5. Project directors submit, with their data, a final report on the project specifying the project's objectives,

procedures, and their estimate of the results of the project.

The emphasis on evaluation is warranted and desirable. Efforts designed to evaluate the services delivered to handicapped children and youth should not only continue but also be intensified. Through the evaluative efforts of individual project directors as well as third party evaluators, the effectiveness of Title VI ESEA in Oregon can only be increased.